

Summary and Recommendations

Scope of Study

1 This study was suggested by the South-West Consultative Group which is concerned with the economic problems of the region. It was their wish to examine them so that they could be seen in sharper focus and in the light of events since the review in the 1966 White Paper on the Scottish Economy. They also wished a fuller assessment of future prospects: they hoped to frame a regional strategy for the short term period up to 1976 and for the more distant period up to 1986. It was the Group's view that such an analysis would be of great value to local authorities concerned with physical and economic plans for the future.

2 It was accepted that development in the region should be directed towards a revitalised South-West based on the primary industries of agriculture and forestry with an increasing proportion of diversified employment in industry and services supplemented by a developing tourist industry. The aim is not only to obtain a more secure and satisfactory employment base but to enrich the region from the opportunities, higher prosperity and social benefits which flow from a well balanced employment structure. The Group considered that in environmental terms the region can scarcely be bettered as a place in which to live, work and play but saw the task as creation of conditions which would allow the potential to be more fully realised.

Past Trends

3 Particularly difficult redevelopment problems in South-West Scotland have been caused by rationalisation in the agricultural and coalmining industries as the South-West has been more strongly dependent for jobs in primary industry than any other Scottish region. In the mid 1960's—at the time the White Paper was written—a deteriorating unemployment situation and a heavy drain of population through migration reflected the loss of many jobs in these industries and in railway and Defence establishment work. While it was expected that there would be a further reduction in the number of jobs in mining and farming the population situation gave more grounds for confidence because of the region's healthy rate of natural increase which largely offset the migration loss.

4 Since 1965, however, the rate of decline in population has worsened because of higher migration and lower natural increase. At the same time unemployment has risen in absolute numbers and in relation to the Scottish average. These adverse trends are due to continued job losses in agriculture and the accelerated contraction of colliery employ-

ment. In the $2\frac{1}{2}$ years since June 1966 the region lost 1,200 coalmining jobs compared with a loss of 800 in the previous 5 years. While the effects of the past reduction in mining will last for several years a further rundown of this scale is not possible as there are only three small collieries remaining in the Study Area. On the other hand the problem of declining employment in agriculture will continue.

5 The fall in total employment in the region has resulted in a marked deterioration in the male unemployment level which is now one and a half times the Scottish average and two and a half times the UK rate. The problem is most severe in the rural areas, particularly Wigtownshire and in the mining areas in the north where extra inducements to new industry have been made available through Special Development Area designation. Unemployment has been less severe in the eastern area where there has been a stronger growth of manufacturing and service employment.

General Prospects

6 Clearly the acceleration of population decline in recent years and the worsening employment situation must raise doubts about the future population balance. However healthy the population structure has been in the past there is an obvious need to secure an improvement in employment opportunities for men to reduce or arrest the adverse movement out of the region. Given that the recent high rate of migration loss—1,200/1,400 per annum—is unacceptable and likely to intensify economic difficulties in the region the estimates of job requirement have been made with the aim of quantifying what additional employment is needed both to achieve a progressive improvement in net migration and a reduction in the region's high unemployment. Account has been taken of trends in employment, the jobs which will be lost and the new ones which can be expected in existing industry. It is manufacturing industry which holds the key to a broader more healthy pattern of employment: an increase in the growth of this sector to 250 male jobs per year from the current rate of 100 per year would seem to be needed to attain an improvement in the region's migration commensurate with the target for Scotland as a whole. If this improvement can be sustained beyond 1976 the region could look forward to a modest increase in total population—some 5,000 by the mid 1980s.

7 The increase in manufacturing industry which has been achieved in recent years has been hard won. It will, therefore, require considerable extra effort to increase the present rate of creation of additional jobs in manufacturing industry. The

assistance provided by the Local Employment and Industrial Development Acts and the Regional Employment Premium in the area, topped up by the Special Development Area provisions in the Girvan and Sanquhar employment exchange areas, and allied to strong local initiatives, is beginning to achieve good results, but the problem of full utilisation of employable men remains to be resolved, and calls for yet further joint efforts throughout the area to make the most of the advantages and incentives conferred by Development and Special Development Area status.

Scope for Industrial Development

8 In districts where population is not heavily concentrated the more sizeable industries now depend on extensive catchment areas and travel to work arrangements and the main policy for strengthening the region must be based on this kind of pattern. Locations in or close to a town where services, social facilities and houses for incoming workers are available are generally preferred, as is a site with good access to the main system of communications. At Stranraer, Girvan and Sanquhar-Kirkconnell the relatively detached catchments imply a vigorous continuation of present investment focussed on the towns, where there is ample physical scope for further expansion, backed by a good understanding between the county and burghal authorities. The Langholm catchment on the other hand is close to the A74-M6 and able to benefit from possible development in this corridor.

9 In the Central and Eastern Sectors where groups of towns lie in the same travel to work areas, potential major industrial sites are present and are convenient to each town: in these areas there is the opportunity to increase the effectiveness of present separate policies by combined action. In the Central Sector the present co-operation, between Dalbeattie, where there is most scope for further expansion and Castle Douglas and Kirkcudbright in training labour for a new factory at Dalbeattie, is an encouraging pointer in this direction but the only existing site for new sizeable industry in the group as a whole, Edingham Castle Estate, remains unprepared for the reception of new industry. Although this site lies within the burgh boundary of Dalbeattie, its promotion and the expenses involved could well be a joint responsibility. In the Eastern Sector the main scope for expansion lies in the Dumfries urban area and in the Annan area.

10 The continuing loss of population and persistent high rate of unemployment in the Western Sector of the region give cause for concern. Stranraer has an important function as a centre for an extensive rural area and as a ferry terminal of increasing importance. Although tenants have been found for the two advance factories so far completed there has been no success in attracting male employing industries. The burgh, however, lies on Loch Ryan which is the only large sheltered anchorage, sailing and harbour area between the Clyde and the Solway and the possibility of the development of these assets gives encouragement for the future. The

sparsely populated Machars district presents a special problem. Here travel to work distances are so considerable and the potential labour force is small that it is clear that unless special measures are taken a continuing serious decline must be expected. Such measures might include the support of the Development Commission and the provision of housing at selected centres such as Minnigaff and Whithorn.

11 In the Eastern Sector the effects of and the opportunities arising from the M6-A74 motorway must be kept under review, particularly in the Gretna-Lockerbie-Annan triangle, and the interests of the South-West region and of the Northern region of England are closely inter-linked in this area. There is already substantial travel to work across the border and the future planning policies for the Annan-Gretna-Carlisle area must be seen as a joint responsibility. The prospect of a Solway City project which might be generated in the longer term as a result of national population pressures should be kept in mind, but on present assessments would seem to be remote.

12 Although the requirements of the larger types of industry limit the number of places where they can go, the contribution which can be made by initiative in developing the smaller kinds of enterprise, both in manufacturing and servicing, is significant. Travel to work is not acceptable to all and the opportunities offered by employment in larger industries should be balanced by the more specialised, creative and highly skilled work involved in high quality products, design, component making, and serving facilities backing up the main producers. There is a need to encourage and foster new enterprise and initiatives within local communities. Regional policy in the South-West should include promotion both of regional locations for the larger types of industry and of local sites for the smaller.

Survey of Burghs

13 The survey of the burghs indicates that only a few are fully prepared for the reception of new industry and incoming workers; in most cases drainage or treatment capacity is near the ultimate limit of satisfactory performance so that further expansion of housing and industry is inhibited. Some 2-3 years might elapse before facilities could be approved and provided. An early review of future policy and development plans is now urgent, to identify, zone, acquire and service land for housing and industry on the scale appropriate for each town in the context of the prospects of the sector or catchment area and allowing for possible groupings for joint action.

Future Prospects of Sectors and Catchment Areas

14 The difficulty in making a realistic regional forecast of employment and population, especially the uncertainty surrounding any prediction of employment growth, is greatly increased at the sector and catchment area level. On the assumption that the region shares in the expected reduction of

Scotland's emigration rate and there will be long term growth of at least 5,000 population, the table below and Map 1 portray a possible pattern of population change. These figures should be taken as only a rough guide and background to the way things may go, to help frame a physical development policy.

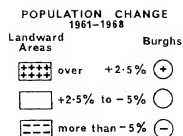
15 It will be appreciated that the scale of growth envisaged until well beyond 1986 does not suggest a change in the present predominantly rural character of the region. Some of the towns will increase their size faster than in recent years but this will still be on a relatively small scale so that the effects of growth are likely to be well dispersed. Clearly, however, measures to improve the economic and demographic strength of the region must be paralleled by action to maintain and enhance the asset of an outstanding environment.

Tourism

16 Tourism, holiday making and sporting activities, wisely handled, are valuable adjuncts to the main economy of the region and have added increasingly to its prosperity. As yet the growth of these activities has not reached the stage where the unspoilt coastline and rural and mountain scenery are seriously threatened. The Strathclyde University's Report on Tourism in the South-West, emphasised, however, that the region will soon be subject to pressures which will constitute a real threat and with which the tourist industry may not be able to cope. It will be important for the local authorities to retain the initiative in shaping and controlling this impact: an essential pre-requisite is for the local authorities in consultation with the Regional Tourist Association to establish priorities which can then be defined in terms of land use in tourism and recreation plans.

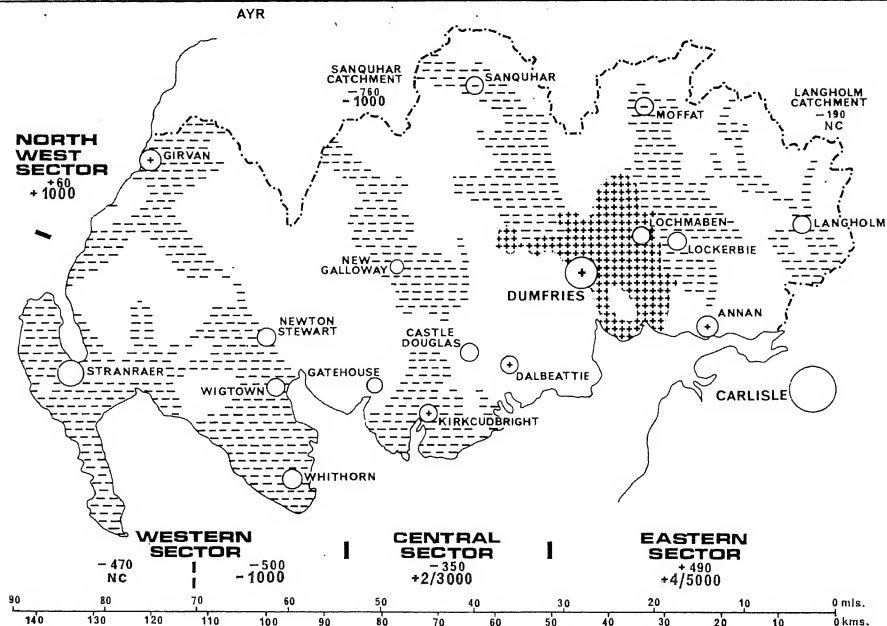
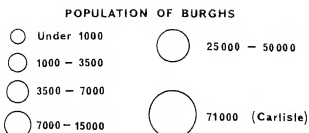
TABLE 1

(1) Eastern Sector	+4-5,000 population		
(2) Central Sector	+2-3,000	„	
(3) Western Sector			
a. Newton Stewart Catchment	-1,000	„	(increase at Minnigaff, decline in hinterland)
b. Stranraer Catchment	No change	„	(Increase in Stranraer, decline in hinterland)
(4) North West Sector	+1,000	„	(mainly at Girvan)
(5) Sanquhar/Kirkconnel Catchment	-1,000	„	(some increase at Sanquhar)
(6) Langholm Catchment	No change	„	



POPULATION CHANGE 1961-68

Sector Change 1961-68-500
Possible future change
in the longer term+1000
No Change.... NC



RECOMMENDATIONS

17 The following are the main recommendations

- (1) That strenuous efforts should be made to increase the rate of creation of additional male jobs in manufacturing industry so that:
 - (a) a better use can be made of the regions manpower resources by reducing unemployment and improving the quality of employment and,
 - (b) migration can be substantially reduced.
- (2) That to tackle the problem of attracting sufficient new industry:
 - (a) a regional planning and industrial promotion organisation should be established;
 - (b) local planning and burghal authorities should where appropriate co-operate in promoting and developing industrial sites for larger industries and in the provision of related housing;
 - (c) local planning authorities should make suitable amendments to their development plans to enable each burgh or other selected centre quickly to put itself in a position to attract industry; and
 - (d) high priority should be given to industrial training by existing and incoming employers in the South-West in order to promote an efficient and flexible labour force.
- (3) That special measures such as enlisting the help of the Development Commission should be considered for rural areas like the Machars.
- (4) That Development Plans throughout the region be urgently reviewed as envisaged in (2) and on the assumption of a longer term growth of population of some 5,000 in the region as portrayed in paragraph 14. Flexibility of approach and arrangements for periodic reviews in the light of progress will be essential.
- (5) That the effects of and the opportunities created by the M6-A74 motorways should be kept under review jointly with the planning authorities south of the Border.
- (6) The local authorities should co-operate in preparing proposals for tourism and recreation throughout the region in consultation with the Regional Tourist Association.

1 Regional Trends and Prospects

1 The South-West, which is both a distinctive part of the Scottish Border land and a part of the Solway basin, lies between the large urban populations of Central Scotland and North-West England. The area has a population of 155,000, 3 per cent of the total population of Scotland. Within the region there is considerable contrast in population change and distribution as portrayed in Maps 1 and 2. This is because of the varying nature of the economy in the different parts of the region and consequently differing prospects for the future which are considered in more detail in Chapters 2 and 3. In this chapter the overall regional situation is discussed in the national perspective in order to present a framework within which the needs and aspirations of different parts of the region may be considered.

Recent Population and Employment Trends

2 The study area consists of the South-West Planning Region (population 150,600 at mid-1968) together with the Langholm area (population 4,500). Since the Registrar General provides corrected estimates and projections on the basis of planning regions, and not for individual local authorities estimates of migration and future population change are in terms of the South-West Planning Region. Table 1 gives the relevant regional figures.

3 Since the middle of the century (1951-69) the population in the region has declined by 4,100 and lately the rate of decline has increased sharply. Map 1 and Chapter 2 show the wide variations within the region and in particular the heavy losses in Wigtownshire. Between 1951 and 1961 and 1961 and 1966 the annual average fall in population was 140; in the last 3 years the annual average rose to 650. The 1961/69 drop in population of 2,700

(1.8%), compares unfavourably with the more or less static position of Scotland as a whole, while the post-1965 deterioration in the South-West's migration loss is in sharp contrast with the recent improvement in Scotland's emigration from the peak figure of 47,000 in 1965/66 to 25,000 in 1968/69.

4 Net migration from the South-West has been in the region of 1,000 annually over the 17-year period 1951-68 and in the 1961-68 period the annual average loss was 1,100, rising from 1,000 in the early 1960s to some 1,200 since 1964. In the past 2 years, 1967-69, net emigration has been almost 1,400 per year. Net migration loss tends to be concentrated in the younger working age and family-forming age groups and therefore affects the population both directly by removing young people from the area and indirectly by removing part of the region's potential natural increase—children who are born to the migrants after they have moved away. Up to 1966 natural increase was at a rate of over 900 per year but in the last 3 years the average rate was only some 600. Whereas before 1966 natural increase and net migration loss were reasonably in balance, the combined effect of reducing natural increase and raising the rate of net emigration has resulted in the sharp increase in the rate of population loss noted above.

5 Should the high migration loss continue and natural increase remain at the post-1967 low level there could well be a deterioration in the region's present healthy population structure.

6 The falling trend in population is closely bound up with the pattern of economic activity in the region, particularly the rundown in job opportunities for men, Table 2. Past experience in the South-West and

TABLE 1

POPULATION CHANGE 1961-66							
	Population 1961	Population Change No.	%	Natural Increase No.	%	Net Migration No.	%
South-West	153,600	-700	-0.6	+4,500	2.9	-5,200	-3.4
Scotland	5,226,100	-800	-0.02	+193,400	3.7	-194,100	-3.7
POPULATION CHANGE 1966-69							
	Population 1966	Population Change No.	%	Natural Increase No.	%	Net Migration No.	%
South-West	152,900	-2,000	-1.3	+1,900	1.2	-3,900	-2.6
Scotland	5,225,300	-2,700	-0.05	+100,300	1.9	-103,000	-2.0

Male Employment 1966 and Change 1961-66

TABLE 2

	1966			Change 1961-66		
Male employees in employment (excluding self-employed) in	South-West Thous.	%	Scotland %	South-West Thous.	%	Scotland %
agriculture, forestry, etc.	6.5	21	5	-2.2	-8	-23
mining and quarrying	1.5	5	4	-0.8	-28	-35
manufacturing	7.4	24	37	+0.7	+10	-1½
construction	4.5	14	14	+0.2	+5	+14
services	11.5	37	40	-0.7	-6	+2½
All industries	31.4	100	100	-2.6	-8	-1

elsewhere has shown that migration levels respond to changes in male employment rather than changes in employment and with this in mind the future level of male jobs has been forecast and related to possible future population levels.

7 Heavy dependence on agriculture coupled with a significant stake in the coal mining industry has made the region particularly vulnerable to the labour force rationalisations which have occurred in these industries over the past decade. Between 1961 and 1966 male employment in the South-West declined by 2,600, at a rate of loss (8%) well above the Scottish average and worse than any other Scottish rural region. Growth in the region's small manufacturing sector, chiefly in chemicals and engineering, compared favourably with other regions but replaced only about one-fifth of job losses from the dominant primary and service sectors.

8 Between 1966 and 1968, a period of employment recession nationally, male employment in the South-West again declined faster than the average Scottish rate despite slight growth in manufacturing. The 1969 figures will probably show a further sharp drop following the loss of 700 mining jobs in the closure of Fauldhead Colliery in August 1968.

9 The rapid changes in the structure of the South-West economy throughout the 1960s has resulted in current problems of high unemployment and inadequate job opportunities; these have been most acute in the coal mining areas but are present in some degree in all parts of the region. Average male unemployment deteriorated from the Scottish average level in 1961 to one and a half times the Scottish rate in 1966, and the relative position has since worsened. Alongside high unemployment goes under-productive use of workers in existing employment. According to a 1968 survey by the Department of Employment and Productivity, average earnings for male employees were among the lowest for any region in the UK.

10 One of the main reasons for the sharp deterioration in employment and in migration is the rapid rate of rationalisation which Britain's coal mining industry has undergone in recent years. In the two and a half years after June 1966, mining employment

in the South-West fell by 1,200 compared with a drop of 800 in the previous five years. In recognition of the severe problems faced by the hard hit mining communities, Sanquhar and Girvan employment exchange areas were designated Special Development Areas in 1968, two of only five such areas in Scotland.

Employment and Population Prospects to 1976

11 Although agriculture will remain a major employer the region's dependence on agriculture, mining and other declining industries has been significantly reduced and the wider economic base provided by the increasing employment in manufacturing industry and services should give the region a more stable employment structure (see Appendix 2). Male employment decline in the early 1970s, is likely to proceed at a slower rate than in the 1960s. Major improvement in population trends is unlikely, however, unless the region's residual problems of high unemployment and under-productive employment can be significantly reduced. An examination of population, unemployment and employment prospects (Appendices 1 and 3) indicates that, on current trends, net migration is unlikely to fall below 1,200 a year in the 1968-76 period. This would be less than the abnormally high rates of the last couple of years but well above the post-1951 average.

12 The region must provide more jobs for men if the rate of population loss is to be reduced and unemployment brought nearer the Scottish average. It is estimated for example that if migration is to fall progressively in line with improvements envisaged for Scotland and the unemployment differential compared with the rest of the country eliminated then a net increase of 250 manufacturing jobs for men is required each year between now and 1976, instead of the average annual rate of 100 which seems likely on the basis of current expectations.

13 New jobs will have to come almost entirely from outside the region and chiefly from manufacturing industry. Any increased demand for local services arising from new manufacturing activity should largely be accommodated by greater turnover or output from the same labour force—leading to more remunerative, rather than extra employment.

14 Employment opportunities for men are the main factor influencing the region's ability to retain its population. Female employment, however, plays an increasingly important role in the region's economy. Jobs for women, other than in agriculture, have risen steadily since 1961 with appreciable gains in services and manufacturing industry. The greatest growth has been in the Eastern Sector but factory work for women has made a useful contribution to the economy of all areas except part of the Newton Stewart employment exchange area. With the tightening supply of women for factory work in the rest of the country the South-West is gaining an increasing share of new manufacturing jobs. There are currently over 650 jobs for women in the pipeline from new and expanding projects. The region's female labour resources are still under-used compared with other parts of the country but in the long term scope for absorbing more female employing industry will depend on success in retaining the region's population; this underlines the importance of providing more jobs for men.

Survey of Population and Employment Prospects 1976-86

15 An employment forecast beyond 1976 for a region such as the South-West would be particularly

unreliable and has not been attempted in detail. In general terms, however, it seems likely that the decline in male employment will be largely complete by the mid 1970s after which some growth might be possible. Agriculture, the major contributor to the loss of jobs up to 1976 should be much more stable at an appreciably lower level while the colliery closure programme will be completed early in the 1970s. With no major declining industry, any increase of manufacturing activity whether from industry already established in the region or from new industry, should represent a net gain in total employment. Provided the intervening years have seen a major improvement in the region's residual problems of unemployment and low earnings it should become possible to direct development efforts towards a re-expansion of regional population.

16 This chapter has examined the South-West's employment needs only in a quantitative sense. But the problem has an important qualitative aspect; unless the range of jobs, especially for white collar workers, can be widened, there is less chance of stemming the out-flow of better qualified people. Attraction of white collar work, whether in technically orientated manufacturing or in office employment projects, would therefore be particularly valuable.

2 Population and Employment Trends and Prospects of Catchment Areas

1 In Chapter 1 past changes in employment and population were described and future prospects considered at the regional level. There are, however, considerable variations within the region, both in terms of past changes and future prospects, and in order to translate the regional forecast into something more meaningful for local authorities, the region has been sub-divided into sectors and catchment areas on the basis of travel to work patterns and these are considered individually below. Eastern, Central, Western and North Western Sectors have been identified with main centres at Dumfries / Annan, Castle Douglas / Dalbeattie, Stranraer / Newton Stewart and Girvan, while Sanquhar and Langholm are the centres of smaller catchment areas (See maps 2, 3 and 4).

EASTERN SECTOR

2 The Eastern Sector includes Dumfries, Annan, Lockerbie, Lochmaben and Moffat and the villages of Gretna, Eastriggs, Ecclefechan, New Abbey, Glencaple, Thornhill, Penpont and Moniaive. It contains the largest concentration of population (70,000—almost half the regional total); and has the advantage of proximity to the A74—M6 motorway. The border area near Gretna is within the Carlisle travel to work catchment and there is some cross border travel to work from the Annan and Langholm areas (see Appendix 5).

3 This is the only sector which has had a continued growth in population from 1951 to the present day, mainly in and around Dumfries and Annan. The sector is both economically and demographically sound. It provides half of all the South-West job opportunities and has a wider range of industries and occupations than is available elsewhere. It seems capable of maintaining a fairly stable level of male employment providing manufacturing industry remains buoyant, and of providing jobs for women in increasing numbers. Although percentage unemployment is low relative to the average in the South-West, in absolute terms there are around 1,000 males and 300 females out of work, a substantial pool of available labour which should assist in the attraction of industry.

4 With most of its population and jobs concentrated in and near the burghs of Dumfries and Annan the area is depending on primary industry for one job in ten so that workers displaced by continuing rationalisation of farm employment, will be more readily absorbed than elsewhere. Some of the landward areas to the east and north which bear the brunt of rural job losses have poor access to the factory and service jobs in Dumfries but compare

favourably in this respect with rural areas further west.

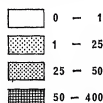
5 The area has been fortunate in recent years in having a large and growing number of manufacturing jobs for men. The heavy metal industries, which had caused so many jobs losses elsewhere in Scotland, are generally absent: most men are employed in large chemical, plastics and rubber manufacturing plants, while the small engineering sector is growing and diversifying. Most recent growth has come from the build-up of ICI's plastics establishment which contributed 700 new jobs between 1961 and 1966, more than offsetting the rundown of the UKAEA labour force at Chapelcross.

6 The same rate of expansion of job opportunities for men is not expected on present knowledge in the period to 1976. ICI's expansion plans for the next few years, although involving considerable capital investment, will directly provide no more than a couple of hundred jobs while UKAEA have announced that their manpower requirements may reduce by some one hundred men. The stable or expanding level of employment of most other male employing establishments in the 1961 and 1966 period gives cause for cautious optimism, qualified by the fact that sudden change of policy or fortune can make past trends irrelevant, for example a measure of rationalisation has followed the take over of Annan's largest engineering company. The dependence of both Dumfries and Annan on fairly large firms for male employment has had the advantage of providing a good range of well paid jobs but could be dangerous, should the future of any of the firms concerned be jeopardised.

7 For women there was not much increase in factory employment between 1961 and 1966 and the number of jobs for women will increase more rapidly in the next few years. In the Annan area, where the ratio of male to female manufacturing workers is six to one, factory work for women is still fairly scarce and many travel out to Dumfries and also to Carlisle for jobs. In Dumfries, factory jobs are much more plentiful and existing firms find women fairly selective in the kind of job they seek. There is nevertheless scope for widening the range of jobs available; for example the light engineering/electronics assembly kind of work is not represented in the area at present.

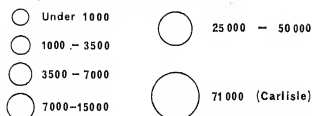
8 Because of Dumfries's position as the main regional service centre and of its prosperous manufacturing activities this area contains the region's main potential for service employment growth. Five hundred more women had service jobs in 1966 than

RURAL POPULATION DENSITY
persons per sq. mile

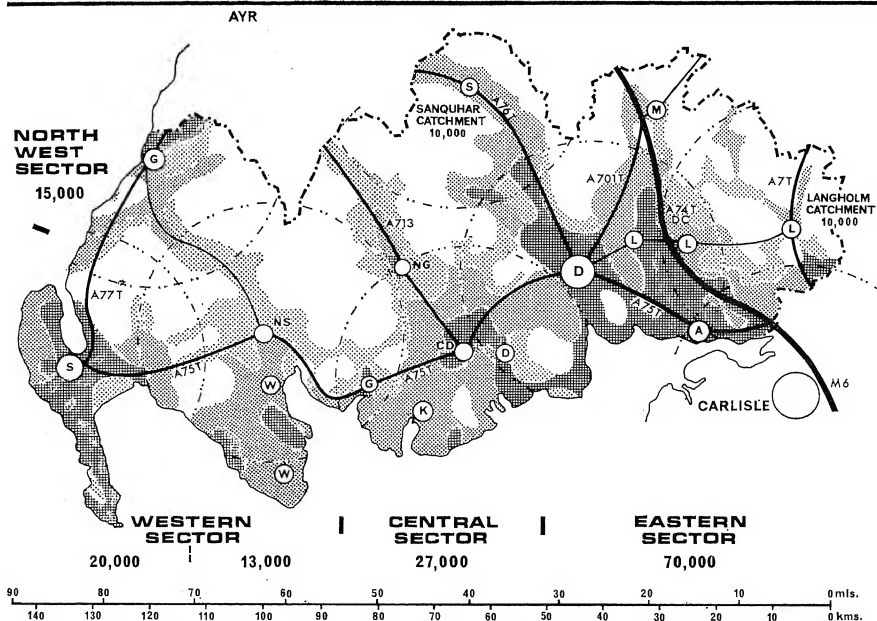


POPULATION DISTRIBUTION AND MAIN CATCHMENT AREAS 1968

POPULATION OF BURGHS



Pecked circles: 15 miles radius from main burghs



in 1961, a growth which may be expected to continue. Transport job losses, particularly severe in this area, resulted in an overall loss of male service jobs between 1961 and 1966 but trends in other industries were more favourable.

9 This sector is both economically and demographically sound and appears to have the best prospects for future growth, particularly in view of the area's proximity to the A74-M6.

10 The main centre of the upper Solway estuary is Carlisle whose sphere of influence and travel to work catchment extends well into the Scottish South-West. Cumberland County and Carlisle City are working on a strategy for development in the greater Carlisle area in conjunction with the Northern Economic Planning Council. Their proposals for development, particularly in the area between Carlisle and the border, will be of direct interest to the South-West and the liaison which has already been established between Scottish and English authorities must continue.

CENTRAL SECTOR

11 The Central Sector includes Castle Douglas, Dalbeattie, Kirkcudbright, New Galloway and Gatehouse of Fleet and the villages of Kippford, Rockcliffe, Twynholm, Crossmichael, Dalry, Springholm, Auchencairn and Palnackie. The catchment area comprehends some 27,000 population, *i.e.* one-sixth of the total of the region.

12 Between 1951 and 1961 both the landward area and the burghs lost population, but since 1961 the loss from the rural areas has halved and has been more than offset by growth in the burghs. The area has proved increasingly attractive to older people in retirement and appreciable growth can be expected from this group in the future.

13 Primary industry—chiefly farming with some forestry—directly provides a quarter of all the area's jobs including a third of those for men, while the major part of the small manufacturing sector is engaged either in processing primary produce such as milk, timber and building stone or in supplying

MAIN TRAVEL TO WORK

E.E. area boundary

Burgh

District

DUMFRIES

Dumfries

Number of people travelling to work

5-10

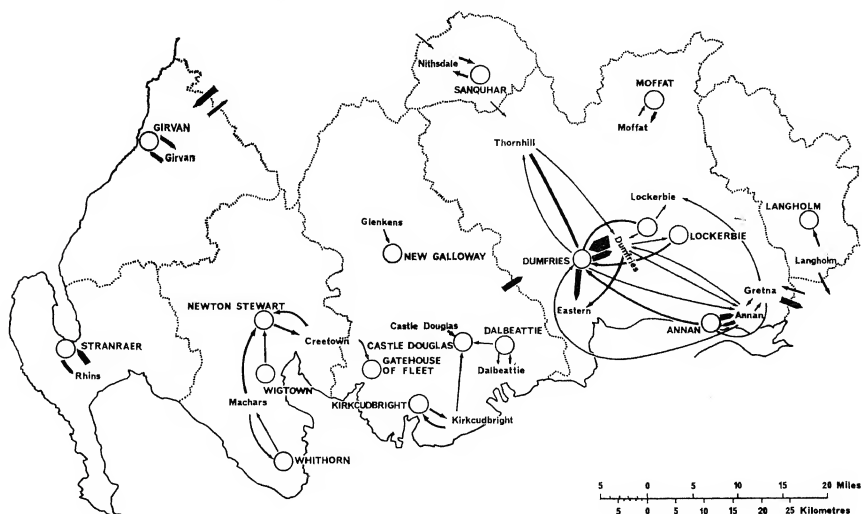
11-25

26-50

51-150

Over 150

10% Sample Figures



needs such as farm machinery or feeding stuffs. Castle Douglas and Kirkcudbright are respectively service, commercial and administrative centres.

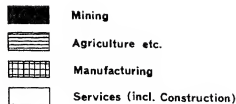
14 Some welcome diversification has occurred with the establishment in Dalbeattie in 1960-61 of two new firms, one employing men in steel fabrication, the other providing jobs, mainly for women, in clothing manufacture. Growth in the period up to 1966 merely kept the level of manufacturing jobs for men in balance because of losses mainly from the timber sector, while new jobs for women were partially offset by closure of a hosiery factory.

15 Future prospects are brighter, provided the traditional sector remains reasonably stable. Employment in steel fabrication has continued to expand while the clothing firm is building a new factory which, when fully operational, could mean a labour force employing 100 more men and 300 or so more women than in 1966. Branches of Dumfries hosiery firms in Castle Douglas and Kirkcudbright, the former only recently established, will be a further source of jobs for women. The level of services and building employment was quite well maintained in 1961-66 despite heavy losses in basic industries, and will benefit from increased industrial activity in the sector.

16 Thus, while up to 1961, the decline in primary industry gave rise to a steady loss of male jobs and heavy emigration, the loss has slackened with the introduction of new manufacturing industry. The improved industrial prospects may enable male employment to be stabilised while there could be a considerable increase in jobs for women. Should this be the case a modest growth in population could be expected in this sector.

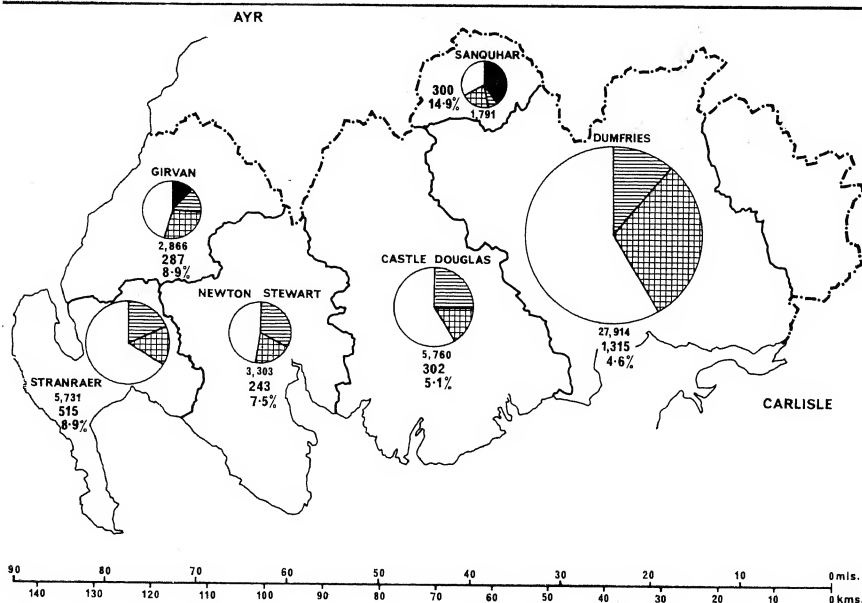
WESTERN SECTOR

17 The Western Sector includes two main catchments centred in Stranraer and Newton Stewart/Minnigaff each having its own but overlapping catchment area. The Stranraer catchment which includes the Mull of Galloway and the Rhins and the villages of Glenluce, Drummole, Sandhead, Portpatrick, Cairnryan and Kirkcolm, comprehends about 20,000 population. The Newton Stewart catchment, which includes the burghs of Wigtown, Whithorn and the Machars villages of Creetown, Garlieston, Isle of Whithorn, Port William and Kirkcubright, comprehends some 13,000 population. Together these catchments contain some 33,000 population, i.e. about one-fifth of the total in the region.



EMPLOYMENT STRUCTURE BY SUBDIVISIONS 1968

	Employment Exchange Area
	Exchange Office
2,866	Number of Insured Persons
287	Annual average wholly unemployed 1968
8.9%	



Stranraer Catchment

18 The population of the Stranraer Catchment area has fallen continuously from 1951 although the rate of loss in the 1960s has been low. While the rural areas have declined throughout the period, Stranraer has been growing both in terms of population and employment.

19 Loss of farm jobs from the rural hinterland has been substantial and will remain a major feature of employment change in the short-term. Stranraer can offer potential employers a relatively large and varied labour supply and good service facilities but seems to have suffered from its relative isolation as it has not been able to attract any male employing projects in recent years to supplement the existing small manufacturing sector engaged mainly in processing dairy produce. Employment in the area will continue to benefit from the growth of a couple of recently established clothing factories but since these are female employing their impact on the area's main problem of lack of male employment will be slight. Unemployment has been persistently high and is currently in the region of 500 persons (9%).

20 Stranraer's function as a terminal for the short sea crossing to Northern Ireland puts transport and attendant tourist services among its main industries. Trends should be more favourable in the next few years than in the 1961/66 period, in that catering and general services should benefit from anticipated further developments of the Irish crossing trade but the shortness of the peak season reduces its impact on permanent job opportunities.

21 In the longer term the indications are that the population of the catchment area should remain fairly static provided Stranraer has reasonable success in attracting male employment.

Newton Stewart Catchment

22 The Newton Stewart Catchment area has the highest rate of population decline in the South-West due both to low natural increase (there was in fact a natural decrease in Newton Stewart) and heavy emigration. A further decline in population in the area seems likely as the mature age structure of the Burghs will continue to give the area low natural increase while the shortage of jobs, highlighted in

the Machars survey (see Appendix 6), and high unemployment, currently 250 (8%), will encourage emigration.

23 Despite the heavy loss of male jobs in primary industry between 1961 and 1966, the area still remains dependent on agriculture and forestry for one-third of its jobs. Continued rationalisation and increased efficiency in agriculture mean that the area will face job losses on a scale approaching that of the mining areas.

24 Most of the small manufacturing sector relies on products of primary industry. There have been small increases in the manufacture of concrete products and wool, but overall manufacturing industry has barely grown. The absence of a main centre of population and manufacturing activity in part explains the area's apparent inability to attract new establishments even of the female employment kind and there are currently no jobs in prospect in manufacturing industry for either men or women. Action to replace lost jobs will be impeded by the scatter of the rural population among isolated communities.

25 Jobs for women are heavily concentrated in the service sector, notably shops, hotels and catering, and continuing tourist development should give further growth although much of this will be only of a seasonal nature.

26 It is concluded that in this sector the prospects for population growth based on an increase of manufacturing activity are not good. Although the possibility of an increase of population in Newton Stewart/Minnigaff remains, in the sector as a whole a further reduction of population is indicated, although the overall population loss might be less if there is an influx of retired people. The Machars area is likely to feel the decline most severely, but some improvement could be effected if additional employment opportunities could also be created at Whithorn.

NORTH-WEST SECTOR

27 Centred on Girvan, the North-West Sector also includes the villages of Ballantrae, Barr, Colmonell and Dailly and comprehends about 15,000 people.

28 Despite growth at Girvan the catchment area has been losing population throughout the post-1951 period. In spite of the growth of manufacturing industry in the Burgh, total employment in the sector has fallen due largely to particularly heavy losses in agriculture and mining. Currently there are almost 300 people out of work, 9% of the insured employees.

29 With the complete rundown in mining and further decline in agriculture, future population change will be strongly tied to Girvan's success in attracting new jobs. Even if new industry does increase opportunities, the closure of the collieries will have serious implications for such mining villages as New Dailly.

30 Particularly encouraging is the recent and continuing growth in manufacturing industry. Expansion, mainly in whisky distilling and chemicals, makes Girvan the only part of the South-West outside Dumfries to have a substantial increase in manufacturing jobs for men in the 1961-66 period. The 250 jobs currently in prospect, half of them for men, are evidence of the area's ability, particularly given Special Development Area incentives, to attract projects with a substantial male job element. These projects will widen the range of factory jobs for women into the electronics field; the moderate growth between 1961 and 1966 was chiefly in clothing and was partially offset by textile losses.

31 With the exception of the construction sector, service employment, which is boosted for women by the tourist trade, has not been a source of growth. Coal mining closures may cause some cutback in service jobs in the areas affected although much less severely than in Sanquhar.

32 The initiative and success of Girvan in attracting a fairly wide range of new manufacturing industry, the attractiveness of the town itself and the proximity of the sector to Maybole and Ayr all give grounds for thinking that modest growth could be achieved.

OTHER SIGNIFICANT AREAS OF POPULATION CATCHMENT

Sanquhar and Kirkcannel

33 Sanquhar and Kirkcannel, some 3 miles apart, lie in the North of the Region and on the main Dumfries-Ayrshire Trunk Road A76. The population of some 10,000 in the catchment area has suffered severely from pit closures. Since 1961 the rundown in mining has given this area the heaviest loss of population in the South-West, the loss being particularly severe from Kirkcannel village. Although further decline seems likely the very youthful age structure of the population, the youngest in the study area, should help to offset emigration.

34 The heavy unemployment in the Sanquhar area, currently about 20% following closures of the coal mines on which the area is almost totally dependent, is recognised as one of the South-West's most pressing problems. Most of the 900 jobs in 1966—over one-half of all the area's employment at that time—have now disappeared with the closure of Fauldhead colliery and the few remaining jobs will be gone by the early 1970s. This leaves the area dependent on a relatively small number of jobs for men in agriculture and manufacturing. Government inducements have brought several factories to the area in recent years. While accounting for about half the factory jobs for men, these establishments are predominantly female employing, drawing on the large female labour reserves, hitherto under-used in an area devoted to male-employing industries.

35 The building and service sector, employing about 500 workers, serves an almost completely

local market. The area although not a main centre for tourism derives benefit from the increasing number of tourists using the A76. Loss of jobs and population in the 1961–66 period depressed the level of service employment, and a further decline in service jobs is expected to follow the closure of Fauldhead and the loss of NCB's local custom. It seems likely that a further decline may occur in this catchment area, the loss being particularly severe in the short term.

Langholm

36 Langholm, lying near the north-east boundary of the region and on trunk route A7 (Carlisle-Hawick-Edinburgh) comprehends a catchment of some 10,000 population in an area which includes the villages of Canonbie and Newcastleton. The important textile industries in the town, however, also draw on the Annan and Lockerbie catchment areas.

37 There has been a slow but steady loss of population from the area, and emigration of young persons has given the burgh an elderly age structure. The population structure is not good and measures to retain or attract young workers are desirable. Again, new male employment is needed, to replace the loss in agricultural employment. No significant population change can be anticipated in this catchment but with a buoyant textile industry seeking more labour some growth in the burgh should occur.

POSSIBLE DISTRIBUTION OF POPULATION CHANGE

38 Should the South-West be successful in improving employment opportunities sufficiently to allow migration to be reduced in line with the expected improvement in national emigration and to allow unemployment to be reduced to the Scottish level then, as indicated in Chapter 1, a growth of some 5,000 can be expected in the longer term. In the light of past trends, our present limited knowledge of future prospects and the development potential noted in Chapter 3, a possible distribution of population change might be as follows:

TABLE 1

Eastern Sector +4/5,000	This sector has the best prospects for the attraction of new industry both from the point of view of its diversified existing industry and larger labour resources and also from its locational advantages. If the South-West is to achieve some longer term growth then much of it must be in this region, particularly in and around Dumfries and Annan.
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TABLE 1 continued

Central Sector +2/3,000	Longer term population growth in this sector will be based both on an improved employment structure and an influx of older persons in retirement.
Western Sector Newton Stewart Catchment –1,000	The decline in primary industry in this area will almost inevitably lead to a decline of population. The extent of the decline will depend partly on the area's success in attracting alternative employment and partly on the level of movement into the area of retired persons.
Stranraer Catchment No Change	On the assumption that Stranraer is successful in attracting some male employing industry then growth in and near the burgh should more or less balance the decline in the rural hinterland.
North-West Sector +1,000	Recent success in attracting industry to this area, and its proximity to Ayr indicates that some modest growth is possible in the longer term.
Sanquhar Catchment –1,000	The effects of the recent rapid rundown in coal mining will lead to a further reduction in population possibly of the order of 1,000.
Langholm Catchment No change	Some small growth in Langholm Burgh should balance the expected decline in the rural area.

Long Term Consideration

39 In the longer term (well beyond 1986) the South-West—particularly its eastern part—may be affected by strategies for large-scale development in the UK. The region is centrally placed and almost equidistant from the North Midland, the Glasgow and Tyneside conurbations and Northern Ireland. With the pending completion of the M6 motorway and the future fast rail link between Glasgow and the south, the area will have excellent communications both with Central Scotland and the Midlands and major developments may well result. There are abundant potential fresh water supplies and on the Scottish side of the Solway there is ample physically suitable land to build up on a major scale. For the period under review, however, it is not anticipated that anything on this scale is likely to develop.

3 Potential for Physical Development

1 The whole region has been a Development Area since 1966 and is therefore eligible for the full range of financial incentives for industry and assistance for training of labour which is set out in Appendices 7 and 8. In addition, the Employment Exchange Areas of Girvan and Sanquhar were made Special Development Areas because of the continuing decline in employment in coal mining. Advance factories have been built by the Ministry of Technology at Girvan, Sanquhar, Stranraer and Dumfries.

2 But the region has to compete with other parts of Development Areas for the limited amount of male employing mobile industry available in Britain as a whole and, although it has an adaptable labour force, it has no very large pools of labour to offer. The region must, therefore, make special efforts to generate its own initiative and to deploy its relatively limited resources in the ways best calculated to attract manufacturing industry. It must make a concerted effort to let industry know what it has to offer to incomers in terms of living and working in an exceptionally attractive environment.

Action by Local Authorities

3 Measures, which experience in other regions has shown to be effective in attracting industry, include:

- a. Voluntary grouping of authorities and the joint appointment of a professional development officer. Priorities can then be agreed, publicity unified and larger labour catchment areas exploited.
- b. When a firm shows interest in a particular location, it is then helpful for the local authority to appoint a representative or group of representatives with full powers to undertake confidential negotiations with the firm.
- c. The powers extended to all local authorities in the Local Government (Development and Finance) (Scotland) Act 1964 can also then be used either to erect a factory for a particular firm or to lend money to an industrialist to help him erect his own factory.
- d. Agreements with overspill exporting authorities and Town Development Schemes have been found useful in some areas.
- e. Authorities can publicise and encourage use of the service offered by the Small Industries Council for Rural Areas of Scotland (SICRAS). This Council, which is financed by the Development Commission, provides a service of managerial and commercial guidance and technical advice and training to small firms (normally those employing not more than 20 skilled workers) in

rural areas and country towns. It can also provide loans to small business and tourist enterprises in these areas.

4 The physical provisions at local level which have been found effective are:

Serviced sites identified as likely to attract industrialists.

Ready availability of houses for incoming workers.

Advance factories built by local authorities.

Adequate drainage and water supplies.

Private houses either under construction or rapidly available on approved and acquired sites.

5 Authorities which are ready to provide these facilities are best placed to seize any opportunities that arise. Those not so prepared may face years of delay, during which an employment crisis may occur, or valuable potential developments may be lost. Table 1 assesses the present state of readiness of each of the burghs.

Factors Influencing the Location of Industrial Growth

6 About 60% of the population of the region is in the rural hinterlands and 40% in the burghs. Twelve of the 17 burghs, including all the largest, are along or near trunk roads A75 and A77. The A75 forms an east/west spine route through the coastal and estuarial lowlands connecting at its eastern end with the A74/M6 motorway and at its western end with the short sea crossing to Northern Ireland, then continuing as A77 northwards into Ayrshire. Since some 95% of the total population of the region is within 15 miles of this communications corridor, it has good prospects for the creation of new employment (see Map 2). Other labour catchments lying outside this corridor but on other main routes are Sanquhar/Kirkconnel on trunk road A76 (Dumfries-Kilmarnock) and Langholm on trunk road A7 (Carlisle-Edinburgh via Hawick).

7 Travel to work is already becoming part of the way of life in the region. Although most movement is within some 15 miles of the source of employment, the labour catchment areas have no precise boundaries, and people living in one are sometimes employed in another (see Map 3). In future the need for labour in the older industries based on natural assets and resources will decline, and there will be a growing demand for labour for the newer industries whose location is determined by labour availability and not by proximity to raw materials.

TABLE 1

The Burghs—Preparedness for Further Development 1969

	L.A. HOUSING			INDUSTRIAL SITES			DRAINAGE	
	1 Housing under construction or ready to start or owned and serviced sites	2 With further land owned or being negotiated	3 Zoned or Proposed only	4 Advance Factory empty or being built; or ^{††} announced*	5 With further land owned or being negotiated L—Over 10 acres S—Under 10 acres	6 Zoned or Proposed only	7 Significant further capacity	8 Scheme to provide further capacity approved in principle
ANNAN	—	—	—	—	S	—	—	—
CASTLE DOUGLAS	—	—	—	—	S	—	—	—
DALBEATTIE	—	—	—	—	—	L	Limited	—
DUMFRIES	—	—	—	Mintech	L.A., L. Mintech, L.	S	—	—
GATEHOUSE	—	—	—	—	—	S	—	—
GIRVAN	—	—	—	—	—	—	—	—
KIRKCUDBRIGHT	—	—	—	L.A. Mintech *	L	L	—	—
LANGHOLM	—	—	—	—	S	—	Limited	—
LOCKERBIE	—	—	—	—	S	—	—	—
LOCHMABEN	—	—	—	—	S	S	—	—
MOFFAT	—	—	—	—	—	—	—	—
NEW GALLOWAY	—	—	—	—	—	S	—	—
NEWTON STEWART	—	—	—	—	—	S	Limited	—
MININGAFF	—	—	—	—	—	L	—	—
SANQUHAR	—	—	—	Mintech *	S	L	Limited	—
KIRKCONNEL	—	—	—	—	L	L	—	—
STRANRAER	—	—	—	Mintech	—	S	—	—
WHITHORN	—	—	—	—	S	—	—	—
WIGTOWN	—	—	—	—	—	—	—	—

WATER SUPPLY: SEE APPENDIX 15

* Subject to satisfactory standards of purification

†† Glasgow Overspill Agreement and Town Development Scheme

† Glasgow Overspill Agreement

So travel to work is likely to increase in the foreseeable future.

8 Some large firms can make their own arrangements for transporting employees but smaller firms cannot. So areas which have a sizeable pool of available labour within reasonable travel-to-work distance can attract the bigger firms, even if public transport is not good, but smaller population centres can have attractions for firms with small labour requirements, and these places can look for help to the Development Commission and the Small Industries Council for the Rural Areas of Scotland.

9 Where population centres are close together and share virtually the same catchment area, joint working is likely to be more effective than separate efforts. Examples are Sanquhar/Kirkconnel, Newton Stewart/Minigaff and Castle Douglas/Dalbeattie/Kirkcudbright. Given the difficulties in attracting new employment and the fact that supply seldom seems to match demand, the need to concentrate effort and pool resources seems inescapable.

The Environment

10 In environmental terms the region is outstanding. Not only does it possess a fine coastline and a great variety of beautiful scenery, attractive towns and many recreational and sporting possibilities but it is unspoiled by past industrial exploitation or large scale urban agglomerations. It is also relatively lightly trafficked and uncongested. For all these reasons it is being discovered as a desirable area for holiday makers and retired persons.

11 But these attractions are also those with increasing appeal to people in modern industry and commerce: freedom from congestion and easy access to the coast and the countryside are at a premium today. These advantages can, therefore, be used to help attract industry to the region, as a counter to the relatively more plentiful labour resources which other regions can offer.

12 The scale of possible growth implied in this study would not reduce these advantages. Much of the hoped for industrial development could take place on land already committed to former railway and war-time installations and airfields, while existing towns would not need to be extended on a scale likely to change their present distinctive and sometimes distinguished character. Modernisation there must be, but the region's heritage and image must also be maintained. For example, nothing is more damaging to that image than central areas which are dowdy and uncared for, or marred by overhead wires or other intrusive equipment. Every effort should, therefore, be made by the burghs to enlist the voluntary co-operation of proprietors in good maintenance and in facelift schemes and by the local planning authorities, under the Civic Amenities Act, to designate conservation areas which they identify as having a high priority.

Town Centre Problems

13 Increasing traffic has now become a major influence in the future improvement of centres of towns and villages, but in the south-west it is not likely to justify bypasses in many towns in the

foreseeable future. There are, however, some places where less ambitious schemes could be helpful—*eg* for limited access relief routes for through traffic which at the same time would assist further development. But different places call for different solutions and will show varying returns in terms of facilitating the passage of through traffic, relieving congestion and assisting employment growth: regional priorities for these schemes have to be judged.

14 However, even if through traffic can be removed, traffic congestion will still occur, despite good traffic management, and will clash with pedestrian enjoyment of the sheltered environment offered by the existing closely built-up layouts and by attractive streets and buildings. There is no easy solution to this problem and it cannot be solved by relying solely either on traffic engineering or on rigid preservationism. Each problem in each town will need its own solution, based on a very careful appraisal of the effect of various solutions on the essential character of the town centre as a whole. But time and effort will be well spent if it results in a town centre which looks good, works efficiently, feels civilised and so adds to the attractions of the town for residents, tourists and incoming industrialists alike.

TOWARDS A PHYSICAL STRATEGY

15 The areas with the greatest physical potential for future expansion are the Dumfries urban area, Annan/Newington, Dalbeattie, Newton Stewart/Minnigaff, Stranraer, Girvan and Sanquhar. But it is not the purpose of this study to try to define the precise future deployment of population and industrial growth, even if that were possible. The local planning authorities themselves are responsible for assessing probabilities and embodying their judgements in development plans. The possibilities sketched in this study, therefore, are merely a background against which these judgements can be made. However, the broad physical programme required for the immediate future seems to be clear: present development plans have to be reviewed, each burgh has to be made ready to provide for housing and industry on an appropriate scale, and certain communities have to be linked in a policy for developing those industrial and housing sites which offer the greatest scope for collective benefit.

16 In the border area of the eastern sector there is considerable travel to work to employment in the Carlisle district, while the completion of the A74/M6 motorway may bring substantial new opportunities. Liaison with the English authorities is, therefore, necessary; they, too, are preparing a strategy for their northern region. The Gretna-Eastriggs area is a complicated one, development is not fully integrated and the full use of land abstracted from agriculture may not be achieved. A special study of this area is required in any event.

Individual Areas—Scope for further Development

17 There follows a brief report on the discussions held with each of the local authorities on the present facilities in the burghs and their adjoining areas for improving the employment position, on the individual or collective roles, on the attitude to further growth of population and on the character and balance of the activities which they would wish to see or preserve.

EASTERN SECTOR

Dumfries Urban Area

DUMFRIES BURGH, population 28,150 (1969)
HEATHHALL—LOCHARBRIGGS, population
c5,000 (1969)

18 Of all the towns in the region Dumfries is best placed for immediate expansion. It has housing sites serviced for a further 1,000 population, its drainage system could cope with a further 5,000 population, although the treatment works would require improvement, and there is scope within its boundary for some 11,000 increase of population. Private enterprise housing is developing on a substantial scale, 100 houses per year, and adequate further provision of land has been made while, having recently completed a major housing programme with a large element of slum clearance, the burgh now intends to build 50 houses per year for general needs and incoming workers. The burgh is also well prepared for incoming industry. There is a 32-acre Ministry of Technology Industrial Estate on which there is an unallocated advance factory—28 acres remain ready for development, and the burgh has recently acquired a 25 acre site but only part of this is presently available. Adjoining the burgh at the former airfield at Heathhall is a privately owned housing and industrial site of which some 170–250 acres could be made available for development and this might be suitable for a larger industry than could be accommodated within the burgh. This if properly serviced could be a major and first class site of regional significance.

19 Besides being the largest town in the region the burgh is the main focus of the communications system. From a traffic aspect this causes problems when through traffic mixes with domestic traffic in the centre of the town and at the river crossings. A land-use and traffic study by consultants giving advice on alternative solutions to this problem has now been completed. Ultimately it is intended to connect the burgh to the A74/M6 motorway by a dual carriageway road (A75).

20 The burgh considers that it is ripe for further industrial development and would encourage and assist the establishment or expansion of a large scale industry within the Dumfries urban area. The Town Council is anxious to sustain and reinforce its position as a regional centre and prepared to assist the establishment of office, business and educational and university developments. It considers, that the many amenities, the attractiveness of the town and

its setting will be a considerable magnet for these activities.

21 The burgh has an overspill agreement with Glasgow (1962) for 100 local authority houses and 9 have been built.

22 No further substantial growth of local authority housing is planned at Locharbriggs and in the Heathhall Airfield area no further land is zoned although some scope remains but drainage is limited to about 500 population. The new Dumfries Technical College is to be built there. If the substantial further capacity of the airfield is to be developed for industry and housing a new drainage scheme will be required. A scheme has been prepared by the County Council and an application for grant submitted.

ANNAN BURGH—NEWINGTON combined population 7,700 (1969)

23 In the burgh land for a further 150 local authority houses is being zoned and acquired and the burgh has been actively infilling sites in the older parts of the town. Adequate land is available for private housing which is developing well. Drainage, however, is now nearing the limit of its capacity. New and significant industrial growth has been taking place within the built-up area by the clearance, reconstruction and modernisation of existing premises and the burgh is now negotiating to extend the scope to include railway land. There is ample physical scope for industrial expansion to the east of the burgh where 5 acres of land are zoned adjoining an existing industry. At Chapelcross nearby some 32 acres of land are being offered by the AEA for immediate use by industry and with drainage by arrangement. At Newington there is further physical scope for extending the housing area but a new drainage scheme would be required.

24 The new junction of A75 now being built on the motorway will improve communications but this will not be fully effective until the A75 is made into a dual carriageway.

25 The Council are generally satisfied with the employment position owing to the progress with industrial growth within the town, the diversity of industrial activity, the satisfactory male employment position and the reserve of female labour still to be tapped. They would be prepared to encourage and would see good prospects of a gradual growth up to 10,000 population over the next ten years.

LOCKERBIE population 2,880 (1969)

26 Ten acres of land for housing and industry have recently been zoned and acquired. Ample land is available for private housing and there is physical scope for further development in areas adjoining the burgh boundary. Drainage facilities are adequate and could be extended readily. The burgh is aware of the advantage of its proximity to the motorway

and the indications of increased interest by industrialists which they are taking steps to meet but they remain concerned about the balance of employment opportunities for men.

LOCHMABEN population 1,260 (1969)

27 Other than small gap sites there is no land presently available for local authority housing but land is available for private development on a small scale. Drainage is at the absolute limit of the capacity of the mains.

28 The Town Council considers the present employment situation to be satisfactory and feels that the emphasis should be on private housing and tourism. The drainage problem is being examined by consultants who are also being asked to look at the feasibility of developing 10 acres of land for housing, light industry and playing fields so that a future need to improve the burgh's employment position can be provided for. A small railway land site is presently available for industry.

GRETN—EASTRIGGS AREA

29 While the study limits itself to an assessment of the burghs it would be unrealistic not to make some reference to this district with its population of about 5,000 and to Dornock-Eastriggs with their dependence on Government supply establishments on both sides of the border, their positioning in the A75/Motorway junction area, where pressures for development may arise, their physical scope for further industrial development and their tourist opportunities. This is clearly an area in which a special study is necessary. It is a complicated area, containing much which can be criticised from an amenity point of view and there is a lack of cohesiveness in many of the developments. The overlap of interest with the adjoining English planning authorities is considerable so that their participation is essential in the preparation of future policies in this area.

MOFFAT population 1,860 (1969)

30 No local authority houses are being built at present but some 20 local authority and 63 private houses are proposed on sites which have been identified. No site for a new industry is available and drainage capacity is limited to the above proposals.

31 The Town Council sees the expansion of tourism and holidaymaking as a major contribution to the economy of the town and it has become a popular and busy centre of calls for tours; even so the Council would like to see better signposting on the motorway. It is also a retirement centre and although this results in an exceptionally unbalanced age structure this does not in the circumstances necessarily cause concern. There are some craft industries, the headquarters of a private forestry group and a firm producing timber houses which provide the kind of employment which the burgh

welcomes. They are concerned with the lack of sufficient employment opportunities for young people and would welcome incomers of the type already referred to.

CENTRAL SECTOR

DALBEATTIE population 3,230 (1969)

32 Of the towns in the Central Sector, Dalbeattie is best equipped to expand its facilities quickly, if to a limited degree, while within its boundary there is the undeveloped Edingham Castle Industrial Estate which is the only large site potentially now available in the sector for the larger types of industry.

33 Fifty houses are under construction for general needs and incoming workers and plans are being prepared for a further 100. Ample land is available for private housing and within the burgh boundary there is considerable scope for the economical development of more housing areas. A relief road now under construction should reduce congestion in the centre of the town and with suitable limited accesses might provide a possible base line for future expansion on the west side of the town. No further site for industry, apart from Edingham Castle, is being presently considered. The drainage treatment works can deal with the housing programme as presently envisaged.

34 Edingham Castle Estate (some 200 acres in private ownership) which is zoned for industrial development contains sizeable areas of flat land and the former Royal Ordnance Factory buildings are mainly on the surface and could easily be developed. Drainage and water supply facilities are not available and some 2-3 years would probably have to elapse before the former could be provided even if an early decision were taken. Access to the Estate from A711 is unsatisfactory and if further development takes place improved arrangements would be necessary. No other land is presently proposed for industry and there is a problem in accommodating service industry within the town.

35 Road communications are generally satisfactory but improvements to the link route A745 connecting Dalbeattie to Castle Douglas and Kirkcudbright may be required if travel-to-work develops to a greater extent than at present.

36 The burgh has been very successful recently in attracting new industry but appreciates that the growth of industry is considerably dependent on the build-up of housing. The Town Council might be prepared to think of growth up to 5,000 total population over the next ten years and would hope then to stabilise at that level so that no drastic change in the character of the town would occur. The town has benefited from tourism and as the service centre for nearby coastal resorts and measures to increase the accommodation facilities are now being considered.

CASTLE DOUGLAS population 3,260 (1969)

37 Land which is presently acceptable for local authority housing is limited to some 50 houses and 30 of these have been completed. Negotiations for land for further local authority housing is at a very early stage and there is scope for some 70 further private houses. The present small industrial estate is partly taken up and space remains for further small scale development; negotiations for additional railway land for industrial development are actively proceeding. Drainage for the town is at the limit of capacity.

38 The A75 trunk road connecting with Dumfries has been progressively improved in recent years and after further improvements towards the Castle Douglas end should provide an adequate link. Through traffic problems in the town have been eased by traffic management and by the adoption of a one-way system in the central area. The County Road Surveyor is of the opinion that a dual carriageway to Dumfries will be required eventually.

39 The burgh would wish to reinforce the status of the town as a district centre with printing, shopping and commercial services, agricultural services and light engineering facilities forming the main basis of its employment structure. While the present employment position is satisfactory (although a shortage of female labour may soon be felt) further modest growth is being encouraged particularly in service and small scale manufacturing industry. The burgh has benefited greatly from tourism and has taken the lead in providing facilities both for accommodation and entertainment. It is also a centre for retirement.

KIRKCUDBRIGHT population 2,730 (1969)

40 A site (railway land) for 50 local authority houses has recently been acquired and layout plans are now being prepared. Adequate land for private housing development is available. No land for industrial development is presently available but the town council are proposing to reserve 10.2 acres to the north of the burgh as an industrial site. Drainage is at the limit of capacity but consultants have now prepared and costed an expansion scheme.

41 The burgh, as an administrative and residential centre, with substantial additional employment in a creamery and a Defence establishment outside the town would not wish to see any major change in this pattern. Nevertheless the Town Council is concerned about the high proportion of retired people and is considering means by which younger people could be retained or attracted. It is concerned to conserve the distinctive architecture and residential character of the town and would not like this prejudiced by too great a prominence of industrial and tourist activities. The town has benefited from tourism and although it does not seek to become a main centre, its present facilities are not always fully taken up because it is off the main Dumfries-Stranraer tourist route.

GATEHOUSE OF FLEET population 800 (1969)

42 Eight local authority houses are being built for young married couples and suitable sites for a further 28 and some 100 private houses have been identified. Private housebuilding is proceeding slowly but steadily. A site of some 4 acres has been identified as suitable for industry. The present drainage system is unsatisfactory and is overloaded. Proposals for a new plant and other improvements are being assessed.

43 The burgh feels that Gatehouse should be developed primarily as a tourist, residential and service centre and is seeking to retain more of its young people by providing houses. Great benefit is being derived from tourism and holidaymaking and the Town Council is keen to expand the facilities in a way beneficial to the local community and to visitors. It is actively promoting a new Civic Centre and encouraging hotel proprietors to provide additional facilities for sport and recreation.

44 The town is notable for its layout and architecture. Everything should be done to conserve these assets and to ensure that development is of the highest standards of design. It is unfortunate that heavy traffic on the trunk road A75 must pass through the main street but the solution of this problem is likely to be delayed because of the considerable cost of a bypass.

NEW GALLOWAY population 340 (1969)

45 Local authority houses are not under construction at present but land is identified for 20 further houses and for 25 private houses. A small knitwear industry has recently been attracted and a partly prepared industrial site of some 2 acres is available. Drainage is to a limited septic tank system.

46 Tourism is expanding satisfactorily and all available accommodation in the town is now fully booked up in the season. The Town Council is, however, disturbed about the employment situation in the area, especially for men, as there is a great deal of part-time working and wage levels tend to be low. Employment for young people is largely in the unskilled categories so that there is considerable dependence on Castle Douglas.

WESTERN SECTOR

(a) Newton Stewart Catchment

NEWTON STEWART BURGH—MINNIGAFF,
combined population c2,300 (1969)

47 The County Councils of Wigtown and Kirkcudbright have already identified the need for a holding point at Newton Stewart and Kirkcudbright County Council has been implementing this policy by developing housing close to an existing industrial site in the adjoining village of Minnigaff. These places form a single community which has the misfortune to be divided by the present administrative boundaries of the local authorities.

48 The Town Council is much concerned about the ageing structure and decline of population and considers that an improvement in employment prospects is essential. Forty-three local authority houses are being built for general needs but there is a shortage of suitable further sites for local authority and private housing and the Council thinks that new industry should be located at Minnigaff. Two small sites are zoned for industry in the burgh and drainage capacity is adequate.

49 Newton Stewart is a main service and tourist centre and the Town Council is giving its full support to the development of accommodation and facilities particularly those which cater for indoor recreation and entertainment.

50 At Minnigaff the County Council has built a considerable number of houses and the population has increased by some 300 in the last ten years. It is now building 52 houses and a further 30 are proposed; these are to cater for further forestry requirements and to meet the needs of enterprises in the Creetown area. The zoning of a large site for private housing is also being considered. A proposed new sewage works with a capacity for 2,000 population is now being assessed. The present industrial site, with a frontage to trunk road A75, is an ex-War Department hutted camp amounting to some 21 acres. A portion has been taken up by service depots including the Post Office and the Forestry Commission and the remainder remains in private ownership. Drainage is presently available only on the basis of the war-time facilities. No new manufacturing industry has been attracted.

51 There is currently considerable doubt about the feasibility of attracting manufacturing industry to this sector of the region and representations are being made to enlist the assistance of the Development Commission. It is also thought that, as a holding point for this sector, Newton Stewart is too far away effectively to assist the problems of Southern Machars and the need to establish secondary holding points at other places such as Whithorn and Wigtown is now being considered.

WIGTOWN BURGH population 1,150 (1969)

52 Current housebuilding has been the infilling of gap sites in the town. There is ample further scope within the burgh boundary on land owned by the Council and sites for some 100 local authority and private houses are zoned but a suitable site is not available for a new industry. Drainage is to septic tanks and further capacity is limited to a small increase in population.

53 The Council is concerned with the local employment situation and feels that, although development at Newton Stewart would be of benefit, an attractive small industrial site should also be available in Wigtown.

WHITHORN BURGH population 1,000 (1969)

54 Nineteen houses are being built under the present local authority programme and are available for general needs and incoming workers; 8 acres are zoned for private houses and while no further land is zoned there is ample scope within the burgh boundary. A three acre industrial site owned by the Town Council is available. The drainage system appears to be at the limit of its capacity.

55 The employment position in the area centred on the burgh is serious and the distances to other potential centres of employment are considerable (Newton Stewart 18 miles and Stranraer 33 miles) so that a case for a secondary holding point at Whithorn emerges for consideration.

(b) Stranraer Catchment

STRANRAER population 9,400 (1969)

56 The burgh has strong initiative and is well prepared for expansion. With a future programme of 5-600 houses in mind, it is presently building 200 houses for general needs and incoming workers and a further programme of 87 houses has been approved. Private housing is proceeding well at about 20 houses per annum and further land is available. Within the burgh boundary there is physical scope for housing and industry up to 16,000 population and the County has instructed their planning consultants to evolve a plan for this scale of expansion.

57 A third Ministry of Technology advance factory of 20,000 sq ft is being built on the Stranraer Industrial Estate where there is space on which a further factory of the same size could be built. There is considerable physical scope for the further extension of the estate and acquisition is unlikely to be difficult; the provision of suitable access to an eastward extension would, however, mean bridging a small valley. Within easy travel to work distance there is the potential for industrial development at Sandmill (140 acres), Cairnryan (associated with jetty facilities for 10-15,000 ton ships) and the former airfield at Castle Kennedy (290 acres); none of these sites is serviced but considerable quantities of water, up to 4 million gallons per day, might be extracted from lochs within 1 mile of the Sandmill and Castle Kennedy sites.

58 Further sewer capacity, serving the west side of the town only, appears to be limited to an additional 8-900 population but since effluent is discharged direct to Loch Ryan the present effluent and the acceptance of this further potential is subject to the satisfaction of the standards set by the Purification Board. In view of these problems, and looking to possible future development of the considerable physical potential for houses and industry on the east side of the town, the Town Council has agreed in principle to the siting of a new sewage treatment works.

59 The burgh has a strong initiative and promotes its facilities and attractions vigorously. Success has

been achieved in attracting new manufacturing industry but this has been mainly female employing. The management of these factories, conscious of the lack of male employment, are assisting in publicising the facilities offered by the town. The Council is also urging the early establishment of a suitable small scale technical centre both as a present need and as an attraction for incoming industry. Landing facilities for executive aircraft are available at West Freugh (with Ministry of Technology landing permission) and Castle Kennedy where there is a runway but no facilities.

60 With improving communications, the expansion of tourism (the Council is urging the replacement of the Youth Hostel) and the growing traffic on the successful Stranraer-Larne short sea crossing, the Council feels that the prospects for growth are becoming brighter. On the other hand great concern continues to be felt about the urgent need for more male employment in the district because of the very high unemployment rate and on these grounds the Town Council is pressing for designation as a Special Development Area.

61 There is an overspill agreement with Glasgow (1961) for 600 houses but no houses have been built under this arrangement.

NORTH-WEST SECTOR

GIRVAN population 6,870 (1969) (*Special Development Area*)

62 The burgh is fully prepared for expansion. One hundred and twelve houses are being completed for general needs and 21 are about to be built for key workers. Sites for 350 houses are in reserve in the Glendoune area and there is physical scope for a further 500 houses within the burgh boundary. Private housing is being built at a good rate (12-15 houses per annum) and more land is available. Town drainage is direct to Girvan Bay without treatment but the Glendoune housing expansion area is drained to a separate new septic tank system. Subject to the success of this system in meeting the requirements of the Purification Board this economical solution might be extended to accommodate a further 500 houses.

63 The town council's industrial estate at Grange-stone, amounting to some 74 acres, has about 10 acres available for immediate development and the remainder after clearance of bunkers. A second Ministry of Technology advance factory has been announced on the estate, the first having been allocated. The burgh has built two advance factories on its own account and has sold both to incoming industrialists. It has also built a factory specifically for another new industry and is now building a third advance factory of 20,000 sq. ft. The estate has its own drainage system with adequate further capacity. Water supply is under urgent review by the Ayrshire and Bute Water Board.

64 The burgh has great initiative and 500 new jobs have been attracted in the last five years. The

burgh sees its labour force and that of its hinterland as one and the Town Council feels that the burgh has the main responsibility for providing jobs in the employment exchange area as a whole. The unemployment rate is running at a high level and a further run down in mining and agriculture is expected; some 245 miners are likely to become redundant in the early 1970's.

65 The Council is very active in promoting tourism and holiday-making. Notable developments are the new beach pavilion and their appointment of a full-time publicity officer, while, amongst other projects, is the promotion of the town as a conference centre so as to lengthen the season. The town has much to offer having exceptional facilities for its size: it is not only well prepared to attract industry and house incoming workers, but also has a distinctive character and attractive coastal setting besides being well equipped as a district and shopping centre and as a modern holiday resort.

66 The burgh has an overspill agreement with Glasgow (1959) for 700 houses, 50 houses have been built by SSHA but only 29 families have moved. A Town Development Scheme was approved in 1964.

Sanquhar Catchment

SANQUHAR BURGH, population 2,060 (1969)
KIRKCONNEL, population c4,000 (*Special Development Area*)

67 Situated in Upper Nithsdale, some 3 miles apart on trunk road A76, the fortunes of Sanquhar and Kirkconnel have been largely tied up with the mining industry. Both places have suffered severely and over the next few years will continue to suffer decline in employment in the local mines which will then be finally closed. NCB policy has been to offer re-employment mainly in the Cumnock area some 17 miles distant, but this has not been wholly acceptable so that policies to improve the local employment and re-employment prospects have also been operating, especially at Sanquhar. Because of their physical proximity and the common problems of re-employment, joint participation is clearly sensible.

68 The burgh is building 26 houses for general needs and incoming workers and a further 75 houses are contemplated on a site already acquired and there is also scope for private housing on attractive sites. A new building for the secondary school is about to start.

69 There has been considerable success in attracting new manufacturing industry, three Ministry of Technology advance factories having already been built and occupied on an attractive industrial estate; negotiations for land for a fourth are now under way. There is substantial scope for further industrial development on the flat and wide valley bottom to the north of the town. A site there has already been taken by Trend Mills and further extensive industrial zoning proposals are now under

active consideration by the local planning authority. The sewage disposal plant serving the burgh is not entirely satisfactory and what small capacity remains will be fully taken up by the industry already moving in. Arrangements are being made to augment the sewage disposal facilities for new industry.

70 The burgh is for the present holding its own but with further mining closures in prospect feels that employment must be expanded or population will decline. The current proposals to extend the zoning of land for industry and the acquisition of more land for housing are an important step in this direction. The burgh is also proving to be a popular centre and stopping place for holidaymakers and tourists and the Town Council, appreciating the benefits, are keen further to develop the present facilities.

71 At Kirkconnel no expansion of housing is contemplated. Until recently no industrial site was available but suitable land extending to some 13 acres and in local authority ownership has now been zoned and a further 12 acres is being proposed.

72 Of the two places Sanquhar is the more attractive. Its site is spacious and has considerable physical scope for housing and industrial expansion; its setting is more open and is free from the blighting effects of mining which are so evident on the more restrictive hillsides at Kirkconnel; and it has an architectural character and visual coherence which comes from having been a Royal Burgh before the mining era.

LANGHOLM, population 2,390 (1969)

73 Starting in 1970 the Town Council is proposing to build, on railway land which they have recently acquired, 121 houses for general needs and incoming workers. The remainder of this land is to be allocated to allow expansion of facilities for industry. The capacity of new drainage treatment works is limited to some 3,000 population and is sufficient to cater for these proposals.

74 The burgh is very conscious of its dependence, and that of the catchment area, on the textile industries concentrated in the town; they are also aware of the increasing dependence of these buoyant industries on a widening travel to work area to obtain labour and the increasing danger of transference of activities elsewhere. They feel that to stand still would be an invitation to industry and population to leave, whereas any houses which they might now build would be taken up by existing industry. In the longer term they would not be adverse to a slow growth of some 2,000 additional population but this would involve opening up some 75 acres of the Castleholm Estate for housing and ancillary industry, and would require a new access bridge over the White Esk and a new drainage system.

75 In population terms the town is just holding its own, predominantly on employment in textiles. The hinterland population continues to decline and a

more diverse range of employment opportunities is required in the district. The Town Council would welcome in this context employment growth, especially for males, centred in the Langholm-Longtown-Kirtlebridge triangle within easy travel to work distance.

76 Langholm is situated on trunk road A7 which is an important route for tourists and, although lightly trafficked at present, also the main connection

between the Central Borders and the M6 motorway. The burgh advertises itself as an attractive centre for quiet holidays but for the time being is not emphasising the tourist element although aware of the rising demand for more facilities and accommodation. The effect of increasing traffic on A7 will have to be kept under review and in particular the burgh would urge improvements south of the town to speed up connection towards Carlisle and the airport.

4 Transport Facilities, Road System and Traffic Capacity

Transport Facilities

1 The South-West, in common with other rural regions of Scotland, has problem areas in the transport network. These stem largely from low population density leading to low capacity usage of public transport and freight facilities, which in turn tends to lead to less frequent or high deficit services and charges higher than might be experienced in more intensely developed parts of the country. A further factor is the high rate of private car ownership—at about 1 per 5 persons the highest in Scotland.

2 Public passenger transport within the area is almost entirely bus traffic and a wide network of routes is worked by the Western SMT Bus Company Ltd., part of the Scottish Transport Group. Negotiations have taken place between the operators and the Consultative Group to improve co-ordination of services and as a result some services have been made more convenient. However, anything greater than a marginal impact cannot be achieved from changes of this type, and any major improvements cannot really be expected without a concentration of population or development along certain corridors of activity. Future planning decisions must recognise this need in order to make full, or at least better, use of existing services.

3 Following the Mid Galloway Transport Study the two principal freight operators in the area, Road Services (Caledonian) Ltd., and British Rail, had discussions about co-ordinating their light freight services, but light freight capacity still exceeds the quantity of goods carried and until there is concentration of population or development in particular areas this position is unlikely to alter. Dumfries is the main focal point both for the haulage of light freight and for short travel-to-work journeys or passenger transport.

4 Railways do not provide an important internal service in the area but two lines give adequate external links, one from Stranraer to Glasgow via Ayr and the other from Dumfries to Glasgow via Kilmarnock and from Dumfries to Carlisle and the South. Expenditure of £55m has been authorised for the electrification, rationalisation and resignalling of railway services between Crewe and Glasgow. This will reduce from 6 hours 40 mins to 5 hours the journey time on the trunk route south of Glasgow to London. The new services will be in operation by 1974. It has been suggested that Dumfries might be a suitable stopping off point for one of British Rail's Motorail Services. There is a nightly sleeper service in both directions between Stranraer and London routed by way of Ayr and Dumfries. This service is

principally for Stranraer-Larne ferry passengers but also provides an important link for necessary business communication from Dumfries to the South.

5 The Stranraer-Larne link provides the only sea service of any importance in the area and has the shortest sea crossing to Ireland with a passage time of two-and-a-half hours. This service is operated by British Rail with the *Antrim Princess* and the *Stena Nordica*, and passenger and car traffic has increased considerably over the last ten years. With the new replacement for the *Stena Nordica* in the spring of 1971 capacity will be increased by a further 25%. Other sea services are mainly confined to small coasters operating from smaller ports, but unlike the Larne ferry they have not enjoyed the same expansion of traffic and make only a marginal contribution to the movement of goods in the area.

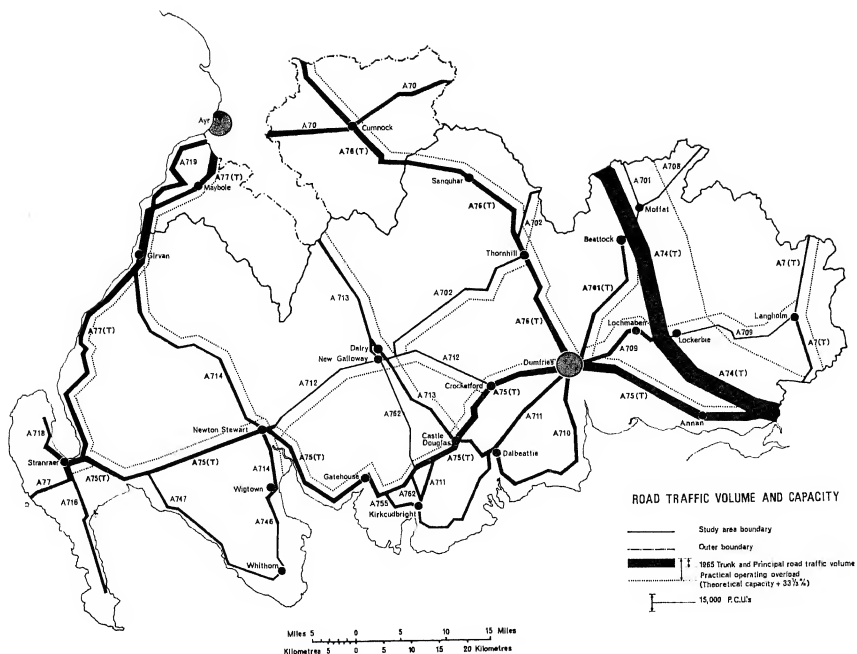
6 There is no active civil aerodrome in the region itself but Carlisle Airport offers connections with London: Prestwick (50–70 miles) and Glasgow (70–90 miles). Airports are also within reasonable reach of the region and offer passenger and freight facilities both internal and international.

7 Problems in the public transport field are to some extent offset by the high level of private car ownership and a good road network. The South-West is the Scottish region with the highest percentage of households having one, two or more cars, 48 per cent of all households being in this group. The region also has a high percentage of households with two cars, 7.5 per cent compared to the Scottish figure of 3.9 per cent.

8 Looked at in a national perspective the South-West is relatively well provided with communications. A steady and continuing improvement in some less good sections of road can be expected over the next decade and no serious constraints are likely to be placed on development.

Road System and Traffic Capacity

9 It is envisaged that the region will experience a traffic growth rate rather higher than the national average as a consequence of increased car ownership in the populous areas to north and south and as established tourist areas, such as the Lake District, become over-patronized. Appendix 9 describes the roads of the region and examines the sufficiency of the system to meet the present and expected traffic needs up to 1986 and beyond.



10 The general conclusion reached is that the existing road system has a considerable amount of spare capacity (see Map 5) and with selective rather than comprehensive improvements, should be well able to cope with the expected increase in tourist traffic. If employment and population in the region grow on a modest scale and on a broad distribution this conclusion will remain valid.

One potential impediment to some industrial development might arise from the existence of bridges of substandard strength on trunk (excepting A74) and principal roads in the area which makes difficult the movement of loads in excess of 40 tons gross to and from and within the region. This situation, so far as trunk roads are concerned, will, however, be progressively remedied in the next decade by a programme for the replacement of weak bridges.

The Road Network

11 The trunk and main principal roads are described in detail in Appendix 9. The main features may be summarised as follows:

(a) Trunk Roads

- (i) Glasgow–Carlisle trunk road A74 is by far the most heavily trafficked road in the region linking by M74 and M6 the industrial centres of Scotland and England.
- (ii) Also in the eastern sector of the region is the A7 Carlisle–Edinburgh trunk road. This is a

very lightly trafficked road and its significance in this study is a means of access to and from Langholm.

- (iii) Of the regional roads proper the Gretna–Dumfries–Stranraer trunk road A75 is the most important, one-third of all the traffic crossing the Border at Gretna taking this route representing a volume equal to half that on A74 north of Gretna. This 'main entrance' from the south will be greatly improved when a mile long dual carriageway diversion of A75, bypassing Gretna, is connected to A74 by a free flow grade-separated junction. Eventually it is expected that this dual carriageway will extend as far as Dumfries.
- (iv) At the western extremity of A75 is Stranraer, the port terminal for the important short sea crossing to Ireland. In between, the road traverses the lowland and coastal periphery where nearly all the main towns are situated. It is the axis or communications corridor upon which most of the region's present development is based. Along it would seem to lie the greatest prospects for future improvement of the region's activity, especially towards the eastern end where, in and around Dumfries and Annan, there is the largest concentration of population and manufacturing industry.

- (v) Trunk road A76, the Dumfries–Kilmarnock road, joins the A75 at Dumfries and serves en route Thornhill, Sanquhar and Kirkconnel. It is more heavily trafficked than the A75 west of Dumfries and a substantial proportion is through traffic. Its importance in conjunction with A75 as a through route to and from the south could increase if the extensive industrial proposals for north Ayrshire come to fruition. It is also of some significance as a travel to work route.
 - (vi) In the west the Stranraer–Girvan–Glasgow trunk road A77 is the northern extension of A75 skirting the western coast line of the region. Traffic south of Girvan is very light but north of the town becomes relatively busy. It is a scenic route, but of poor alignment and better suited to tourist than to the freight and container traffic which has become more evident of late.
- (b) *Principal Roads*
- (i) There is a good network of principal and lesser roads serving the region. Many of these are spurs off the A75 and serve the Solway Firth coastal areas. The A713 and A714 are through routes to the Ayrshire coast whilst the A712 and A702 together provide a mainly tourist route to Edinburgh. This route is appreciably shorter in distance from Stranraer to Edinburgh than via A75 and Dumfries but its alignment, crossing the grain of the country, is poor and not suited to heavy traffic. However, it has high scenic qualities and gives access to places which are attractive for recreation so that growth of this kind of traffic can be expected.
 - (ii) The A701/A709 connecting Dumfries with Langholm via Lochmaben and Lockerbie is another link route which runs across the grain of the topography. It too is lightly trafficked but has travel to work significance.

Priorities for Improvement

12 Inter-town roads in the South-West are by most standards very lightly trafficked and cannot, therefore, attract the expenditure of large sums on comprehensive improvement of standards. Never-

theless, subject to the future increases in traffic envisaged in this report being realised, and subject also to normal engineering and cost benefit considerations, a steady if not dramatic improvement can be expected especially on A75, A76 and A77.

13 Because the ultimate planned alignments for these roads involve in places substantial diversions including bypasses, it will become progressively more difficult to carry out local improvements which would conform to ultimate alignments. As this situation develops there is a risk that short-term necessities could be thwarted by long-term good intentions which may not be realistic and this will require to be watched. It is necessary in these considerations to have first regard to the priority needs of through traffic but if these can be met and at the same time offer attraction to local development so much the better. In any event it is unlikely that any bypass schemes would be programmed for construction, before the full potential of good traffic management including off-street parking had been exploited and the possibilities of local widening within the community explored. The particular problem of traffic congestion in Dumfries has recently been the subject of special study and the burgh is expected shortly to decide on the first measures to be taken.

14 It is likely that as a result of the increase in car ownership, better communications, more leisure time and overcrowding of established tourist regions, the South-West will enjoy an upsurge in tourism. It is hoped that the attraction of industry to the area may be looked on with similar optimism. The roads in the region are, therefore, likely to be called upon to carry much more traffic than hitherto. For the most part the spare capacity that now exists will readily cope and the steady improvements proposed should maintain this position. However, notwithstanding the predictions made in this chapter and in Appendix 9, the traffic needs of the area will be kept continuously under review.

15 In conclusion it can be said with confidence that, subject to normal restraints of good planning, there is nothing in the road system of the South-West, as it now exists or is intended to be improved, which should deter further tourist or commercial development from taking place.

5 Agriculture, Forestry and Fishing

AGRICULTURE

1 For purposes of the overall study, the South-West includes the southern part of Ayrshire. Agriculture is, however, more readily and accurately considered on the basis of whole counties; and except where otherwise indicated, this paper and the appendices, therefore, relate to the Counties of Dumfries, Kirkcudbright and Wigtownshire. For convenience, these are referred to as 'the three counties', references to 'the South-West' being to the entire study area including the southern part of Ayrshire. Conclusions drawn from a study of the three counties are regarded as valid for the entire study area. The main agricultural features of the South-West are illustrated on map 6.

The Land

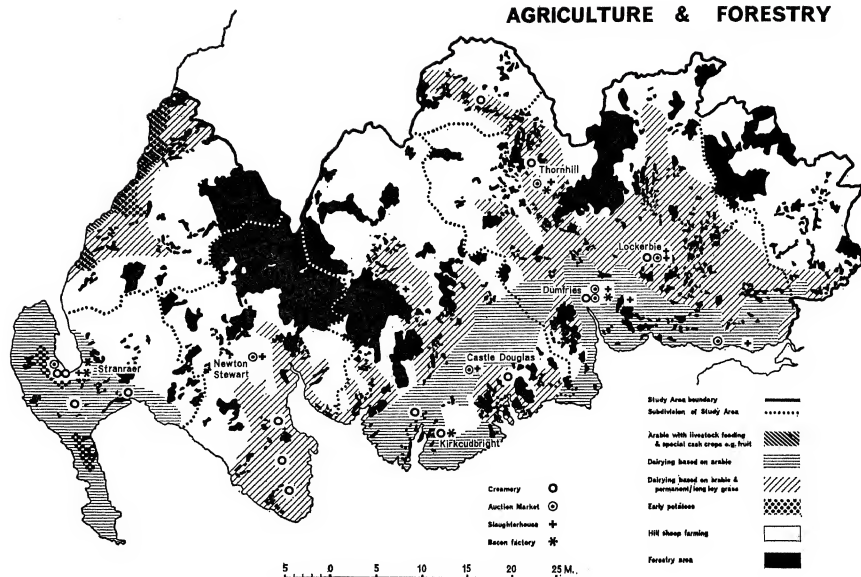
2 In the South-West, agriculture is the most important single industry, both in production and employment. In the three counties, it occupies 1.3 million acres, of which 0.8 million are rough grazing. There are 2,700 full-time farms (which occupy 95 per cent of the agricultural land and are responsible for 98 per cent of the output) and 1,400 part-time and other holdings.

3 The mild and moist climate favours grazing rather than tillage, and the predominant types of farming are the rearing of sheep and cattle and, more especially, dairying. Compared with districts such as Upland Ayrshire where small farms, intensive stocking and heavy purchases of feeding make the production of high-priced winter milk a necessity, dairy farms in the South-West are both better able to grow their own winter feed and to produce milk more cheaply during the longer grazing season. They also have the advantage of being larger; herds of over 100 cows are found, especially in Wigtownshire. Next to dairy farms, the most numerous type is the upland farm, which depends more on cattle-rearing than on sheep. These farms often cell salvaging heifers of the dairy breeds as well as beef stores, and so they too are dependent on the prosperity of the dairy industry. While both hill sheep and upland farms rely on the Calf and Hill Cattle Subsidies to maintain the profitability of the cattle enterprise (the Hill Sheep Subsidy is also important to them), in general they are more productive and more profitable than similar types of farms in many parts of the North and West Highlands. Although cattle-fattening farms are not common, except in some favoured areas such as Lower Annandale, fair numbers of fat cattle come from the dairy farms. Cash crops are little grown; and small, intensive holdings are unimportant, as are pigs and poultry generally.

Cropping, Stocking and Output

4 When compared with Scotland as a whole, the changes that took place in the three counties between 1963 and 1968 show interesting differences (although sometimes only of degree) which reflect the South-West's suitability for dairying and stock-rearing. For example, while the Scottish figures show a small increase in tillage, the acreage of crops in the three counties fell and that of grass rose. Statistics of fertiliser usage, however, show that consumption of fertiliser, and particularly of nitrogen, increased more in the three counties than in Scotland as a whole between 1963 and 1968. The inference is that the increase in the intensity of grassland usage and the productivity of grassland in the three counties has been comparatively rapid. This drop in tillage resulted from a movement away from crops to intensive grass farming. In common with the rest of the country, there was a marked reduction in the acreage of potatoes, particularly of first early varieties; and, as the acreage in the three counties has been fairly stable since 1966, it seems unlikely that a recovery can be expected there. The three counties have also participated in the general displacement of oats by barley. In addition to the resulting continuous fall in the oat acreage, the barley acreage contracted slightly after its rapid rise up to 1966. There has, therefore, been a net decline in the area devoted to these cereals. As regards livestock, there have been smaller decreases in dairy cows and sheep than elsewhere in the country, a greater increase in beef cows and reductions instead of increases in pigs and poultry.

5 Despite the fall in the number of dairy cows between 1963 and 1968, the sales of milk from farms rose from 66.7 million gallons in 1962-63 to 70.2 million gallons in 1967-68, indicating an increase in sales per cow. As the registered milk producers declined in number from 1,800 in 1963 to 1,500 in 1968 and the average herd size rose, milk sales per producer increased by about one-quarter. Several factors would contribute to this—the augmentation of herds, the amalgamation of units, and the going out of production of smaller herds. But the greatest single technical factor contributing to increased milk production is the improved systems of grassland farming and better use of grass products. It seems likely that the trend will continue to be in the direction of reduced numbers of registered producers, increased size of herd, and increased sales of milk per cow. As little if any decline in the total number of cows is to be expected, total output of milk will rise slowly. There will, of course, be annual fluctuations resulting mainly from the effect of weather on grazings and on the crops for winter feed.



6 Detailed information about cropping and stocking is given at Appendix 10.

Employment and Mechanisation

7 Between 1963 and 1968 the number of farm workers (full-time, part-time and casual) fell by 30 per cent for Scotland and by 28 per cent for the three counties. The slightly smaller reduction in the three counties may have been due to the predominance of dairying and stock rearing, where it is less easy to mechanise and more necessary to retain workers. Both in the three counties and in the country as a whole, the percentage reduction in the number of workers was greater in the five-year period after 1963 than in the 10 years before.

8 The three counties had 8,300 farm workers in 1963 and only 6,000 in 1968. Of these, nearly 4,800 were male full-time workers. When 1963 and 1968 are compared, the most notable change is the great reduction in the number of youths (males under 20). Detailed information about the agricultural labour force is given at Appendix 11. A notable feature is that, compared with Scotland, the three counties had higher percentages in the age groups up to 34 and lower percentages of the older workers.

9 As the work connected with milk production is skilled and exacting, improvements that simplify and reduce manual work are constantly sought. The

fall in the number of dairy workers can be expected to continue, although some changes lead to improved working conditions rather than a reduction in the number of workers. The possibilities of work simplification and mechanisation are much less on hill and upland farms, but it seems likely that this type of farm will be no less affected than others by the decline in the number of workers seeking employment in agriculture, and they too will, therefore, have to make do with fewer workers. Cropping farms, no doubt, still offer the best opportunities for mechanisation and reduction in the number of workers; but these are of less significance in the South-West than elsewhere.

Ancillary Employment

10 The number of businesses and employees indirectly concerned with agriculture on the processing, supplying, retailing and transportation sides is not easily calculated. Employment of this kind is, however, important, especially in the various market towns.

11 There are some 14 creameries operating in the South-West. They account for the bulk of milk powder production in Scotland, for approximately 80 per cent of condensed milk, 80 per cent of cheese, over 50 per cent of butter and some 5 per cent of fresh cream. There is a considerable seasonal element in the work of the creameries; and the plant at present installed is consequently operated substantially below full capacity during the off-season.

12 The level of employment in the creameries has remained steady around the figure of 1,100 in recent years; but as these plants have to work seven days per week, they will find increasing difficulty in recruiting staff in competition with other employers who can offer a five-day week.

13 The eight auction markets in the South-West are well shared out between the towns, and each serves its local area. The three principal markets are at Annan, Castle Douglas and Dumfries.

14 There are ten slaughter houses, mainly concentrated in the south-east near main north-south road and rail routes.

15 Bacon factories are to be found at six centres, the largest at Thornhill, Dumfries. Finally, there are a number of firms offering a variety of agricultural services. These are estimated to number just under 100, this figure having shown a slight decline in recent years.

Diversion of Agricultural Land to Afforestation

16 Planting by the Forestry Commission in the South-West is at present resulting in the change-over of between 5,000 and 6,000 acres from agricultural use to forestry each year. It is envisaged that this should increase to 9,000 acres annually by 1975.

17 The afforestation is almost entirely on the hills formerly used for hill sheep and to a lesser extent for hill cattle. There is no use of low ground pasture or arable land. The Commission are aware of the need to integrate afforestation with agriculture for example, by placing the woodlands so that they give shelter to the farm land. And they are also aware of the amenity aspect of afforestation.

18 It is estimated that 64,500 acres will be planted between 1969 and 1976, displacing 18,600 breeding ewes (4 per cent of the stock in the three counties) and 640 breeding cattle (1·3 per cent of the stock). In the past, displacement of stock by afforestation has not been reflected in reduction of stock, because increased productivity and better management have allowed maintenance of the same stocks on reduced acreages. Virtually no reduction was seen following planting of 28,000 acres in the South-West between 1963 and 1968. It is not, therefore, expected that planting to be undertaken up to 1976 will lead to any overall decline in numbers of sheep.

19 The proposed planting is likely to result in the displacement of 11 shepherds between 1969 and 1971 and of 26 between 1972 and 1976; the number employed in the area will be increased by those employed on forestry work.

20 Planting has also been undertaken in the area by private forestry and up to October 1968 about 60,000 acres had been planted. It is estimated that this has displaced 23,000 breeding ewes and 800

breeding cattle and 46 shepherds. The private estates have at present some 15,000 acres available for planting, which will result in the displacement of a further 6,000 breeding ewes and 200 breeding cattle plus 12 shepherds. This will not necessarily result in an equal reduction in the total numbers of stock in the area.

Short-Term Trends—Agriculture

21 There will continue to be a demand for occupation of such farms as become vacant. This will come both from farmers wishing to add land to their own units, and from those wishing to farm the vacant units as they stand. Much of the land becoming vacant seems likely to be used for the former purpose. In addition, some farm land (although not a great deal) will be required for urban and industrial development; and as indicated in paragraph 18 some will be required for afforestation. On balance, therefore, it seems likely that the number of farms and farmers will continue to fall (although less rapidly than the number of workers).

22 Taking the farm classification as a rough guide, the numbers of farmers fell by two to three hundred between 1962 and 1968, and a further reduction of about 200 is likely by 1973. From 1963 to 1968 the fall in the number of male full-time workers averaged 5·7 per cent a year. In the long run, the rate of decline might be expected to taper off, if only because of the increasing difficulty of dispensing with workers as the average number per farm falls; but there is no clear indication that this stage has yet been reached. An annual reduction of 5 per cent between 1968 and 1973 is, therefore, forecast. For female full-time workers, the yearly rate of decline averaged 11·2 per cent between 1963 and 1968 and is forecast at 10 per cent between 1968 and 1973. Changes in the numbers of part-time, casual and seasonal workers have been erratic but with a downward trend. The annual rate of decline in 1968/1973 is forecast at 2 per cent and 8 per cent for male and female part-time workers and at 5 per cent and 7 per cent for male and female casual workers, respectively. Applying these forecasts to the three counties, the reduction in numbers between 1968 and 1973 is estimated at 1,500. This comprises about 1,150 male and 150 female full-time workers, 100 part-time workers and 100 casual and seasonal workers.

23 Dairying is certain to remain predominant in the agriculture of the South-West. On some dairy farms more beef may be produced from the dairy herd. Farmers may choose this way of utilising the increased production of grassland, instead of keeping extra dairy cows or sheep; or they may prefer to feed barley rather than to sell it as a cash crop. The hill and upland farms cannot usually change over to other enterprises; and development is confined to intensification by trying to fatten some of their lambs or cattle, or by increasing the number of cattle. A common way of improving output is the feeding of concentrates to hill ewes in winter. Some farms are trying to cut costs by wintering hogs in

sheds. In the case of the relatively small number of cattle-fattening and cropping farms, the growing of the higher-yielding barley instead of oats provides more grain for feed or for sale.

Short-Term Trends—Agricultural Ancillaries

24 There is, in the short term, unlikely to be any radical change in the scale of output and employment afforded by agricultural ancillaries, although a shallow decline in the level of employment seems likely.

25 As regards the creameries, an ample supply of their raw materials seems assured. The products are of high quality and will find a market but at prices which reflect the availability of imports: the intense competition in this field has been recognised by the Government's action in negotiating voluntary restraint and agreements with foreign suppliers of butter and cheese. Further rationalisation of production units will take place. Because of the need to cater for round-the-week acceptances of raw milk, managements will have to seek means of making employment in creameries more attractive and remunerative. Both for this reason and as a means of generally increasing efficiency, further sophistication of plant mechanisation seems likely.

26 The present trend towards dead-weight marketing of livestock within the South-West (at present more marked in sheep than in cattle) seems likely to continue, but little change is foreseen in the short term in the balance between auction markets and slaughtering facilities, nor is it thought likely that there will be any significant change in the combined scale of these facilities.

27 The recent slow decline in the numbers of small ancillary businesses (agricultural engineers, welding businesses and the like) seems likely to continue and may accelerate with increasing centralisation in bigger depots of car and machinery maintenance facilities.

Research, Advisory and Development Services

28 The Agricultural Research, Advisory and Development Services have been of importance to the improvement of production and productivity in the agriculture of the South-West (a brief descriptive account of the agricultural advisory service in south-west Scotland is at Appendix 12). This has shown itself, for example, in the development of efficient farm building units, and in the improvement of business management. The West of Scotland Agricultural College, which is in process of moving completely from Glasgow to Auchincruive, Ayr, has three offices in the South-West. The dairy farm, which is of particular importance in the South-West, benefits from the specialised dairy research of the Hannah Dairy Research Institute at Ayr as well as from the experimental and development services of the Agricultural College. The Soil Survey of Scotland, which is based on the Macaulay Institute for Soil Research, Aberdeen, has already mapped some

parts of south-west Scotland as part of its comprehensive programme of soil survey.

Long-Term Trends

29 Agriculture in the South-West is specialised, but on the whole more prosperous and progressive than in other areas. There is a well established and enterprising co-operative society (West Cumberland Farmers Ltd.), the largest in Britain, engaged mainly in supplying goods to farms but also in marketing farm products such as eggs and poultry. Most of the farms can face the future with confidence, the exceptions being some of the smaller units in the lowlands (which will have to intensify, expand or be amalgamated) and some farms in the hill and uplands.

30 The economic position of agriculture in the South-West in the longer term will inevitably be largely dependent on the future development of agricultural policy for the country as a whole. This policy is likely to be influenced by a number of factors such as the extent to which it is desirable to expand home food production, and the effect in individual areas of the means adopted to pursue the aims of the national policy. In this connection, it is relevant to point out that, as in the UK generally, agriculture in the South-West is at present substantially dependent on a variety of subsidy and grant schemes, particularly in the hill and upland areas. These schemes are mainly intended either to maintain or increase existing levels of production or to provide an incentive for farmers to improve their land, buildings and business efficiency, etc. (A note on the more important existing subsidy schemes is included at Appendix 13.) The principal conclusions suggested by this study are that agriculture in the South-West is likely to become progressively more efficient, more heavily capitalised and more productive, while employing fewer people on larger units and occupying slightly less land. The same pattern of rationalisation in larger, more efficient units, with a proportionately smaller labour content, seems likely to be repeated in ancillary industries.

31 While it seems clear that agriculture and the ancillary industries will continue to form the important element in the economic life of the South-West, there will be two significant changes in their relationship with the other kinds of economic and social activity. Firstly, the ancillary industries seem likely to become more heavily concentrated than at present. Secondly, there will be a sharp decline in the total number of people finding employment in agriculture and the ancillaries. There will in consequence be a substantial decline in the population of the rural parts of the area; and this reduction will be reflected in a decline in the total population of the area, unless new employment is found for the centres of population to offset the decline in agricultural employment in the rural areas.

32 Agriculture in the South-West, as elsewhere, is something of a paradox in terms of population and

employment. It is already efficient and is becoming progressively more so. It cannot afford to do otherwise. But, by becoming more efficient, it helps to create problems relating to the maintenance of the overall population, the balance of population as between rural areas and the towns and (in consequence of the change in the balance of population) in the maintenance of rural services. Agriculture is a necessary and integral element in the life of the South-West, and it is in the interests of the entire community—both agricultural and non-agricultural—to ensure that the wider problems caused in part by improvements in agricultural efficiency are overcome.

Agriculture and Forestry

33 While forestry and agriculture are always, by the nature of things, competitors for the limited amount of land available, a situation has been reached in which it seems possible to achieve further integration between them to the advantage of both. Despite this possibility, forestry's main return will continue to come from large-scale planting.

FORESTRY

34 Forestry practice, which had remained virtually unchanged for centuries, has been spectacularly modernised during the last twenty-five years. The ever-increasing scale of forestry programmes, in planting and in harvesting, has encouraged the development and use of mechanical plant to an extent that would have been unbelievable to foresters of a generation ago. One natural consequence of this development is that the Forestry Commission has been able to increase its planting and harvesting programmes without a corresponding increase in labour and this, of course, is also true of private estates which have substantial forest programmes.

35 Traditionally a long-term investment, forestry today is becoming a large-scale industry and it is in the development of this latter aspect that one can foresee the contribution which forestry will make in areas such as South-West Scotland. At present the Commission has within the South-West area 150,000 acres and private estates 60,000 acres of managed plantations. By about 1980, on the reasonable assumption that current planting programmes are maintained in both public and private sectors, this total of 210,000 acres will have increased to 300,000.

36 The Commission's assessment is that the forests of this region are capable of an ultimate sustained yield of 4 tons of timber per acre per annum. This amounts, on a forest acreage of 300,000 to an annual output of 1·2 million tons which is in fact approximately the same amount which the Forestry Commission at present produces from all its woods in Great Britain. The achievement of this figure (a sustained yield of 1·2 million tons per annum)

rests on the establishment of forests with balanced proportions of the crops in the various age classes. This process will eventually be completed soon after the turn of the century. Until then, the annual output of timber will continue to increase progressively but, clearly, the sooner the planting and establishment of new crops in the area is completed the sooner the ultimate goal of a sustained yield will be achieved.

37 At this stage it is obviously impossible to predict accurately the effect which a sustained timber harvest of this size will have on the industrial, economic, population, social and recreational aspects of the region in about 30 years' time. It may well be that this will be a gradual evolution moving with the progressive annual increase in the timber harvest over the period.

38 In the shorter term, the annual production of timber in the area is estimated at 300,000 tons by 1980, which is about three times the volume of current production. About 40% of the 1980 production will be sawmill timber and the remainder will be suitable for pitwood and manufacture to pulpwood and chipboard.

39 The potential viability of a timber-using industry, eg pulp, paper, board mill, does not rest alone on the availability of raw material, though this is obviously an essential factor. Although the feasibility of a new timber industry in the area cannot be discussed here in detail, it is clear that in a proposition of this kind timing is a factor of great importance. It would, for instance, be worthwhile to consider introducing such an industry early, supplementing local supplies from adjoining areas, rather than to wait until local supplies are adequate, only to find then that they have been irretrievably committed to firms outside the area.

FISHING

40 The sea fishing industry is not strongly represented in the area, consisting mostly of groups of small boats fishing for white fish or shellfish, with little shore activity. There are good salmon fisheries, both commercial and sporting, particularly along the Solway Firth and in the rivers flowing into it.

41 Around the coast from Girvan to Annan there are about a dozen fishing ports from which some 60 to 70 small boats operate, employing about 200 fishermen. White fish landings in the area have been of the order of £90,000 in value in recent years, and in some years considerable quantities of herring are landed at Portpatrick from boats fishing the Isle of Man and Irish Sea grounds. The main fishing centre in the area is Girvan where in 1967 the white fish catch amounted to about 13,000 cwts. valued at £58,000 and the herring catch to 6,000 cwts. valued at £18,000. Shellfish landings throughout the area were valued at about £90,000 in 1967. Annan is the centre of a small shrimp fishery and at

several ports there are landings of lobsters and nephrops.

42 The main shore activities are in the area of Girvan and Annan. There is a boatyard at Girvan engaged in building inshore boats up to 65 ft. in length and carrying out a considerable part of the repair work for the Clyde fleet. Three or four traditional wooden boats are built at this yard each year, giving employment to about 25 men. Near Girvan a large factory employing a staff of about 320 is engaged in extracting alginic acid and various by-products from seaweed, gathered at a number of areas on the Scottish coast and in Ireland. The factory completes the processing of seaweed milled and dried at other factories on the west coast in the same ownership. At Annan a factory with over 100 full-time employees processes nephrops brought in from several Scottish fisheries, and shrimps caught by local boats. Some white fish is also handled. The factory was expanded in recent years and was the first in Scotland to introduce a liquid nitrogen plant for the freezing of nephrops.

43 Sea Angling is developing in the area with Clubs at Girvan, Stranraer and Port William. The Girvan Club has already held a sea angling festival, which experience elsewhere suggests to be one of the best ways of attracting visiting anglers and building up the sport as a tourist attraction for the area. The supply of such requisites as boats, tackle and bait would become a small but useful subsidiary source of employment.

44 The South-West of Scotland is an important salmon fishing area. In 1967 about 80 persons were employed full-time on salmon netting during the season extending from February to August. The value of the catch of salmon, grilse and sea trout by all methods of fishing (commercial and sporting) was approximately £180,000.

45 Most of the methods used for net fishing in the Solway are specialised and differ from those in use

elsewhere in Scotland. The 'fixed engines' are each covered by a statutory certificate which designates the type, position, construction and dimensions of the net concerned. The more conventional equipment of sweep nets and bag nets is also used both inside the Solway Firth and on the Wigtown and Ayrshire coast.

46 The Solway rivers and a number of other rivers joining the sea along the Wigtown and Ayrshire coasts have high potential value as a tourist attraction for anglers. They offer good fishing to both local residents and visiting anglers at relatively low cost. The most important angling river in the area is the Nith in Dumfriesshire, where most of the water is open to visitors through local angling clubs. Many other rivers in South-West Scotland offer similar facilities.

47 For the future, it is not expected that there will be any substantial development in the catching side of sea fisheries. Shell fish processing might be expanded, with supplies drawn from outside the area. Any modernisation of the catching methods of commercial salmon fisheries will first require an amendment of the law but the increase which has taken place in the use of angling facilities is expected to continue. The outbreak of salmon disease which first occurred in Scotland towards the end of 1966 has affected a number of rivers in the South-West. The number of diseased fish removed from rivers in 1969 was lower than in the two previous years, but it is too early yet to say whether there has been any real improvement in the situation.

48 The production of trout for the table by fish farming methods has been in progress in the area for over two years. The South-West has advantages for this activity in the way of water supply and climate, but development will depend on the ability to meet keen competition from Denmark and other foreign countries, and possibly from other parts of Scotland.

6 Tourism and Recreation

Attractions and Priorities

1 Tourism is a valuable adjunct to the economy and contributes increasingly to the prosperity of the region. In the past, perhaps because the region was thought to lack the dramatic and spectacular scenic qualities of the Highlands and Lake District, it was not exploited as a large scale tourist holiday area. Today, because of its increasing accessibility to highly populous areas like the Midlands, congestion in areas like the Lake District, and the great expansion of the car owning and caravanning and camping public in general, its charm and beauty are being discovered by a rapidly increasing number of holidaymakers and visitors. The growing importance of tourism in the region's economy has been comprehensively studied in the 'Galloway Project' Report prepared by Strathclyde University in 1968 for the Scottish Tourist Board. This study accepts the proposals and recommendations made there and reiterates a number of their conclusions. The physical planning aspects of tourist development are further considered; and the area of study is increased to include the whole of the South-West region. Particular attention is paid to the treatment of the region's great natural resource—the coastline.

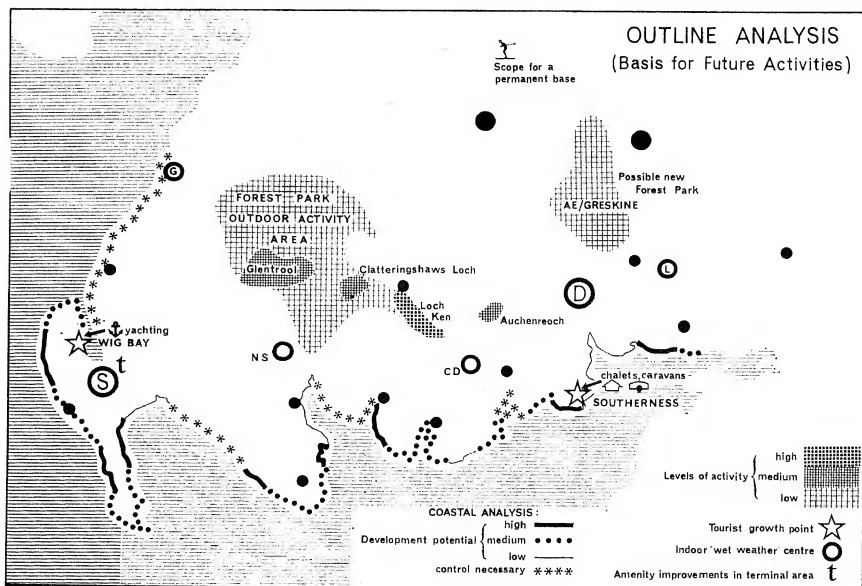
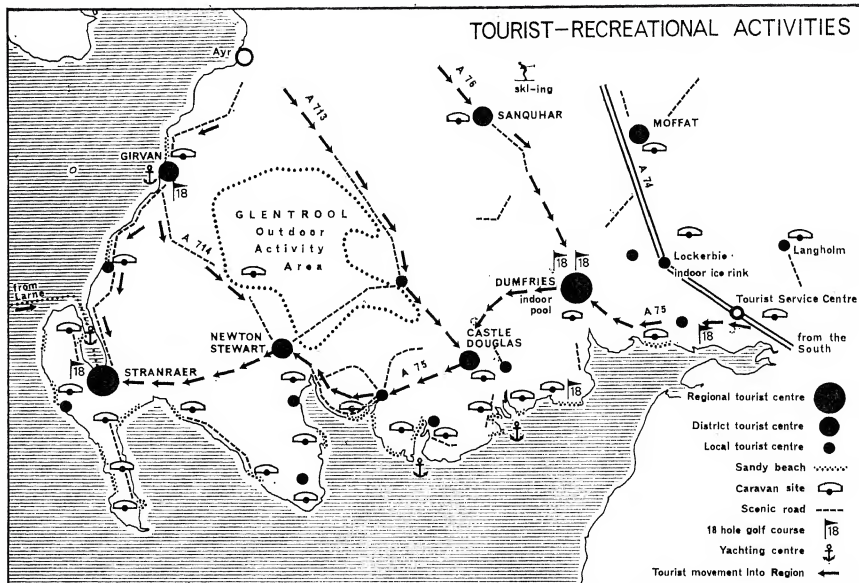
2 The region's main assets are its spaciousness, epitomised in its 220 miles of coastline with numerous small beaches, the unspoilt pleasant character of the countryside and the charm of the burghs and small villages. There are many good fishing rivers and lochs and opportunities for hill-walking and other outdoor activities. The climate is relatively mild and the Solway Firth, which benefits from the Gulf Stream is relatively warm; but the coast is not all suitable for safe sea bathing. The region is rich in archaeological, historical and literary associations and the contrast of forest, mountain, meadow and sea produce the most striking landscapes. The value of these assets and attractions must not be allowed to depreciate. The coastline particularly will be increasingly subject to pressures commonplace in the south of England. Map 7A outlines the main tourist/recreational activities.

3 The need for facilities for entertainment, indoor recreation and sports, including golf, tennis and boating, for tourists and holidaymakers is recognised. The provision of indoor facilities can be critical in extending the season or in periods of bad weather. Well established resorts are generally well provided with a range of these facilities. Perhaps only Dumfries, Stranraer and Girvan can aim at achieving this. Elsewhere much will depend on enterprise in providing modest facilities which can be sustained on a local basis. Interesting examples are the pro-

grammes of entertainments and events organised by the local authorities and the private caravan site operators. Local authorities are also active in improving access to some of the smaller beaches with pull-ins for viewing, car parking and toilet facilities, and in improving and extending caravan and camping sites with the help of financial assistance from the Secretary of State under the terms of the Countryside Act. Commendable measures have been taken by many small burghs and villages throughout the region both to improve tourist facilities and their landscape setting. The most urgent priorities remain however, the provision of car parks, pull-ins, toilet facilities, and really effective litter control. An inherent part of the image of the region is its present freedom from the defacement which can result from intensive and careless usage of the highways and the land adjoining. Irreparable damage can also result from badly conceived lay-bys or service areas and untidy camp sites. This is, of course, a national problem. Serious damage has been done in other areas and this must not be allowed to happen in the South-West.

4 Glen Trool Forest Park embracing 250 square miles of splendid Galloway scenery is the major Forestry Commission contribution to outdoor recreation in the South-West. There are walkways, parking and picnicking facilities, a caravan and camping site and shop, but according to the Galloway Project, there is room for both an improvement and expansion of existing facilities, particularly forest walks and pony trekking ways. Shooting and stalking can be a fringe benefit in extending the season but it is impossible to combine stalking and walking in the same area at the same time, and care and forethought will be necessary. Forestry Commission policy on public access to forests as distinct from forest parks is to encourage people to walk in them subject to certain safeguards, but not to motor through them. The Commission is alive to the increasing demands for outdoor recreation; and although no decisions have yet been taken the Ae/Greskine area offers possibilities as a future Forest Park. Also in an effort to harmonise economic demands with amenity considerations, the Commission retains an eminent landscape architect in a consultative capacity.

5 The South-West has a number of sailing clubs catering largely for local demands. Some expansion is possible at the established centre of Kippford and there is a considerable yearly increase in the number of sailing dinghies in the triangle of the Fleet Bay Estuary. The severe tides of the Solway, however, make it unlikely that the region can fully accommodate what is, in national terms, a rapidly in-



creasing sport. There is vast potential for the development of small yacht sailing at Wig Bay on the west side of Loch Ryan. The great advantage of Wig Bay compared with the Machars coast, is that apart from being the only sheltered anchorage south of the Clyde there is a good depth of water at all states of the tide and, therefore, people travelling from outside the region can be virtually assured of a day's sailing. A project, utilising the existing old sea-plane slipway, and including a swimming pool and skating rink, has been prepared by Wigtown County Council's planning consultants. There are also possibilities for development on the Cairnryan side of Loch Ryan; and possibilities for the development of inland sailing, specially on Loch Ken.

6 The Galloway Project underlined the need for better signposting, tourist information service, identification of caravan and camping sites, improved litter collection and toilet facilities at popular tourist attractions throughout the region. Improved standardised signposting means that the visitor has less excuse for encroaching on farm lands and helps to avoid despoiling the countryside with a heterogeneous collection of signs. It is, therefore, very important in areas within the agriculture/forestry belt which mainly lies within ten miles north and south of the major tourist road, the A75.

7 Unlike many other regions, the South-West is fortunate in having the opportunity of planning to cater for and derive benefit from tourism in a co-ordinated way before serious harm has been done to the landscape or the amenity and enjoyment of the resident population. Experience of this problem, in this and in other areas, points to a solution in which the public authorities contribute with planning initiative and investment. The initiative cannot be left wholly in the hands of the private sector, which is sometimes influenced unduly by the chance acquisition of land and purely commercial consideration. To reconcile the public and private interest and to locate diverse activities where they are not compatible, the local authorities must devise and publicise plans for developing tourism and recreation, and themselves undertake provision of car parks, toilets, etc. The facilities provided in any individual development must be in keeping with the character of the area and the scope for recreational use. It is helpful if sketch plans are available when any development is discussed.

TOURISM: GUIDELINES FOR DEVELOPMENT

Dumfries/Moffat/Gretna Area

8 The preparation of a strategy map for the whole region, indicating areas suitable for various types of tourist development, would be a valuable preliminary measure in helping to guide the private sector and reconcile all interests. If the opportunity is not taken soon the region will be heavily committed to 'ad hoc' tourist development and the proper planning of tourism will be made progressively more difficult. Map 7B and the following paragraphs suggest an outline basis for such a map which

would have to be refined and expressed in land-use terms by the local planning authorities. The conclusions of a coastal landscape survey, commissioned by the Scottish Development Department and revised for the study, are incorporated on the same map.

9 In tourist terms Dumfries is the main regional collection and distribution point. It should, therefore, provide good information services, adequate catering, accommodation and recreational facilities and good signposting to the surrounding day, weekend and holiday centres.

10 Apart from its romantic connections, Gretna has an important part to play, being strategically situated at the connection of the A75 and the north/south motorway, the A74. This is an area which must give concern from an amenity and image point of view and as suggested in Chapter 3, para. 29, requires special study. There is presently a proposal for a motorway service station to be sited to the north of the A75/A74 junction about one and a half miles from the Border. Facilities would include a hotel, shop facilities, petrol filling station, tourist information centre and car parking, caravan and chalet areas. It is arguable whether this is the best location for the tourist information centre: a strong case could be made for siting it at the border south of the turn-off along the principal route into the region, the A75.

11 Moffat is a well established retirement, holiday and tourist centre and its pleasant and spacious central shopping area is a popular stopping place for touring coaches. It is by-passed by the A74 but it is situated on the scenic routes to Edinburgh, the A701 and (by St Mary's Loch) the A708.

12 Annan, situated on the Annan river with its attractions for fishing, has the opportunity to benefit both from passing trade and the attraction of its own tourist/recreational facilities.

13 The continued growth of Southernness could create a holiday and retirement centre which could support recreational and holiday facilities with wide appeal, within easy reach of the Dumfries urban area, and could thus take some of the day and weekend visitor impact from the traditional villages such as Kippford and Rockcliffe where it would not be so easily accommodated. In addition to the existing 18 hole golf course, hotel, shopping centre and public house there is wide scope for development. It may be advisable, however, to study the optimum size and character of Southernness. Any expansion plan should incorporate in appropriate stages provision for further car parking, toilet facilities and open space.

14 Further expansion at Kippford and Rockcliffe must be carefully handled as both villages reach saturation point in the summer months. Although a recent proposal for a car park in Rockcliffe has proved unacceptable some car-parking and toilet provision is clearly necessary.

Castle Douglas/Kirkcudbright/Gatehouse Area

15 Castle Douglas, situated on the main regional tourist route, the A75, has an attractive landscape and recreational facility in Carlingwark Loch. It is a growing tourist service and shopping centre and is a good base for visiting Loch Ken and the many neighbouring scenic roads and areas, both inland and coastal. Its function is to provide adequate accommodation, tourist information and indoor entertainment and recreational facilities; good signposting to the neighbouring resorts and attractions is essential. Threave House, which is the property of the National Trust for Scotland, could be a suitable information centre. There are existing toilets, room for parking and the gardens and castle ruins would provide an extra attraction for visitors.

16 In the Kirkcudbright/Gatehouse area future development must be strongly conservational due to the high environmental quality of the district and the outstanding architectural merit of the two towns. Increasing tourist impact could detract from the amenity of this area: particularly so in Gatehouse on the A75. Here private subscription is being sought for the building of a civic and concert centre; a puppet theatre is planned. Attractive sites will continue to be developed for high quality housing. Careful control of the expansion of caravan sites is essential. There is scope at the Sandgreen-Knockbrex area for chalet development; and sea angling at Kirkcudbright may well develop and provide an additional attraction of a suitable character.

17 The stretch of the A75 between Gatehouse and Creetown is renowned for its scenic quality and is designated a scenic route. It is also the main regional through route and with the increasing pressure of commercial traffic more lay-bys are required, so that visitors can safely draw up to view their surroundings and the commercial driver can have a clear road ahead. Insofar as there is room for caravans and camping development on the coastward side of the road, it must be carefully controlled, minimising visual intrusiveness and pedestrian and vehicular cross-road traffic.

Loch Ken/Glentool/Clatteringshaws/Glenkens Area

18 Loch Ken has potential as a high activity recreational area. Communications and accessibility are good and there is a need for caravan/picnicking facilities within easy reach of the important tourist route A713. Sailing, and possibly water ski-ing, could be further developed but the areas would need to be carefully defined. A thriving sailing club would be a great asset with possibly a small area set aside for ancillary caravans. The development of coarse fishing would help to extend the season.

19 There is a popular Forestry Commission caravan and camping site in Glentool Forest Park and another is proposed off the Newton Stewart/New Galloway road in the Murray's Monument area. The Bruce Memorial is an interesting well-visited feature

in a magnificent setting with other attractive features on its approach road. Such is the popularity that further provision is certain to be required for picnicking and car parking.

20 Clatteringshaws Loch is rather exposed and is really a 'stopping and looking' place. The Forestry Commission, however, own neighbouring land and once this has been afforested it might afford some shelter and security for boating. At present the prime need is for more car parking space and in the longer term there may be scope for a hotel or motel with an ancillary caravan site.

21 Newton Stewart is the main centre serving this inland tourist area. Its function is to provide an information centre, accommodation, 'wet-weather' facilities and good signposting to the surrounding tourist/holiday areas, both to the north in Glentool and the south in the Machars. At present, for example, there are no signs at Newton Stewart pointing out the way to the Forest Park; the first sign is at Bargrennan only a few minutes drive from the Glen.

22 The South of Scotland Electricity Board's cottage group near Kendoon has potential; and, given cash and vision, could be developed with modest wet weather facilities to serve the ideal hill walking area of New Galloway/Dalry/Carsphairn. New Galloway and Dalry are local centres which could increase their service functions and further develop as attractive tourist bases.

Stranraer, The Machars, and The Mull of Galloway

23 Stranraer, like Dumfries, is a tourist service centre of regional importance and is within easy reach of other centres which cater both for holiday makers and day or week-end visitors. With the increase in cross-channel traffic to Ireland there is a high premium on the improvement in amenity and facilities in the ferry terminal area and provision of hostel accommodation for young people should be considered.

24 As mentioned in the main text there is a vast potential for small yacht sailing at Wig Bay on Loch Ryan as well as safe sea bathing. This is the only sheltered anchorage south of the Clyde, and it is the area with by far the best scope for the development of sailing in the South-West.

25 The coastal resorts of the Machars are receiving an increasing number of holidaymakers and caravanners and one of the largest caravan sites in the South-West is sited at Burrow Head. As visitors going to the coast tend just to pass through the burghs and villages without stopping, the opinion has been expressed that the towns receive little benefit from the increase in holidaymaking. In order to counteract this tendency more might be made of facilities and attractions within the towns. Whithorn, for example, has its priory, monastery and museum of early Christian relics; Wigtown has some recreational

and sports facilities, and the Isle of Whithorn, situated close to Burrow Head and St Ninian's Cave, is a growing sea angling and sailing centre.

26 The Mull of Galloway and the Rhins are of high scenic quality with views enhanced by the excellent seascapes and the panorama of Arran, Kintyre, Ailsa Craig and Northern Ireland. The mild climate makes the growth of semi-tropical plants and trees possible in sheltered places. The burghs and villages have a special character and charm with colour washed houses in attractive streets. Portpatrick, with its harbour, for instance, is a fine example of a coastal village. There is a thriving tourist industry which could be greatly expanded. Attractions include the sea cliffs and sandy bays of the western side of the Mull of Galloway, the sandy beaches at Monreith, Drummore, Port Logan, Portpatrick and the Logan policies which include special sub-tropical plants and trees. Generally there is room for an increase in tourists throughout the district; and roads to some of the smaller beaches, including Lady Bay and Killantrigan, are being improved by the County Council. Parking places, picnic places and pull-ins at viewpoints are being provided. A small picnic place, playground and paddling pool is being laid out at Portpatrick by the District Council. There is wide scope at Sandhead which is relatively close to Stranraer. It has a substantial beach and is developing as a popular caravanning and camping area.

The West Coast

27 There are large concentrations of caravans between Dunure and Lendalloch; and it is County Council policy to both improve the amenity of existing sites and to exercise strong control over new caravan development. Although tourism is expanding all the time, some concern is felt at the renting of caravan stances on a seasonal basis with the result that many touring caravanners are unable to obtain sites for short stays. Seasonal stances, however, do bring money into the district and since many of the caravans are immobile they do not add to road congestion. Greatly improved car-parking facilities and provisions are urgently required at Maidens and also an increased provision of pull-ins at viewpoints throughout the area.

28 Girvan, on the A77, is a major tourist and holiday centre and the Town Council is very active in developing facilities and in advertising. The restaurant, amusement and concert hall complex is indicative of the burgh's go-ahead spirit.

Sanquhar/Wanlockhead/Langholm

29 Sanquhar, on the main tourist route from Ayrshire, the A76, has a small caravan site, a nine-hole golf course and a bowling green. It is a growing

hill walking and fishing centre and, with its considerable charm, has scope for an increase in many types of tourist facility.

30 The hills around Wanlockhead are used for ski-ing, and a hill walking club already operates from here. These activities should increase in popularity as Wanlockhead is only about an hour's drive from Edinburgh and Glasgow. It is understood that there is a proposal to develop all facilities and services necessary for a small ski-ing centre.

31 Langholm, on the A7, is a burgh of considerable charm and there is excellent local fishing on the Esk. There is a parking area available for one night stops by caravans. Like Sanquhar, its strategic position could enable it to develop as a popular touring base.

Financial Assistance

32 Under the Development of Tourism Act, 1969, the new statutory Scottish Tourist Board will co-ordinate the activities of the voluntary regional bodies which include the recently constituted South-West Board. Grants and loans will be available for new hotel accommodation and extensions, and possibly for specific tourist projects, along with refund of SET for hoteliers. Because the South-West is a Development Area maximum grants (25% as opposed to 20%) will be available. Financial assistance is now also available under the Countryside Act and it is noteworthy that of the five applications for grant approved by the Secretary of State in the first year of its operation, two were in the South-West. One was by Castle Douglas Town Council for improvements to their caravan site and the other to Dumfries County Council for a view point at Caerlaverock Nature Reserve, near Caerlaverock Castle, one of several notable Ancient Monuments in the area. The first Country Park in Scotland has been established at Culzean Castle in Ayrshire by the local planning authorities working together with the National Trust for Scotland, and countryside grants are being made towards its development.

33 There is also at present in operation a Tourism Loan Scheme, financed by the Development Commission and administered in Scotland by the Small Industries Council for Rural Areas of Scotland. Under this scheme assistance can be provided to small hotels, boarding houses, etc. in the rural parts of Development Areas for buildings, purchase of equipment and working capital, up to an overall limit of £25,000 at any one time. The intention of this scheme is primarily to provide further underpinning of the rural economy by attracting additional visitors to the areas concerned and by developing the opportunities for part and whole-time employment in these areas.

Population—Trends and Projections

1 The Study of the South-West at the time of the White Paper on *The Scottish Economy 1965-70* concluded that the region as a whole had a healthy population structure. The high net migration loss from the region had been offset by a high natural increase and this situation was expected to continue maintaining a stable or at the worst a slowly declining population and few, if any, major problems were expected to arise in the near future from the continuation of the existing trend. It was recognised, however, that while the overall situation was fairly stable, certain rural areas would have a continued decline in population as the numbers employed in agriculture decreased. The White Paper identified holding points in these areas, for example, Stranraer, Girvan, Newton Stewart, Sanquhar and small burghs in Kirkcudbright, and also emphasised the importance of a prosperous Dumfries/Annan area for the health of the region as a whole.

2 This Appendix starts from the work done for and conclusions of the White Paper study and aims at up-dating and evaluating it and looking at the future pattern of change over a longer period than the five years covered in the White Paper. A look at the main sub-divisions of the South-West is included in Chapter 2.

Population Distribution and Recent Trends

3 The Study Area has a population of 155,000 of which almost one half live in the Dumfries/Annan catchment area. The pattern of population density and distribution clearly demonstrates the contrast between the upland interior and the fairly densely peopled coastal lowlands and river valleys. The proportion of the population living in the burghs, 41%, is the lowest of any of the Planning Regions in Scotland and contrasts sharply with the figure of 68% in the neighbouring Borders. Between 1951 and 1966 this proportion has increased from 38% to 41%.

4 Many of the burghs, particularly those in Galloway, are extremely small, for example Wigtown 1,200, Whithorn 1,000, Gatehouse 800 and New Galloway 330, but despite their small size they are urban in function. The pattern of rural population distribution is for the most part one of scattered farmsteads and small village communities, a few up to 1,000 in size but on the whole having no more than 300 persons.

5 The population of the Study Area declined by 1,400 (0.9%) between 1951 and 1961 and by a further 1,800 (1.2%) between 1961 and 1968, a total decline of 3,200 (2%) over the period 1951 to 1968 (see Tables 1 and 2). There has, therefore,

been a slow but steady decline throughout the last eighteen years. A comparison between the rate of loss from the five rural regions since 1961 shows that the loss from the South-West is in line with that of the Highlands and Tayside but appreciably below that of the North-East and the Borders. Table 2 shows the components of migration and natural increase and it is clear that the fairly low percentage loss is due to the high natural increase which has almost made up the heavy loss through migration, the percentage rates of both natural increase and migration being higher than those for all the rural regions except the North-East.

6 A useful comparison can be made between the aggregate population change, natural increase and net migration of the landward areas and the burghs. Table 2 shows that while the burghs have, in net terms, held most of their natural increase and have grown by 2.1%, the landward areas, despite their higher natural increase rate, 3.8% against 2.7% have declined by 2.5% due to a net migration loss of 6.2%. Rural depopulation is thus one of the major features of the Study Area, and one which we must attempt to understand and forecast if we are to make meaningful population projections for the future.

7 Table 4, Age Structure 1951-61-66, shows a decline in the population of working age and an increase in the older age group. This trend is typical of the Scottish and GB trends and is not particular to the region. The 1966 age structure of the population in the Economic Planning Region differs very little from that of Scotland as a whole.

8 The ratio of females per 100 males in 1966 is lower in the South-West region than in any other rural region and is a further indication of the balanced state of the region's overall population structure. The ratio of females per 100 males for the Economic Planning Regions and Scotland is shown in Table 5.

Population Projections

9 The Registrar General has prepared four projections based on migration assumptions agreed with the Study Team (see annex to Appendix 1).

The first of these (projection A) is a natural increase projection which results in a 17,000 increase in the population of the study area by 1986. On this assumption the population of working age will increase by 10,200, that of school age by 5,500 and the older age group by 1,100. While the older age group will have increased in absolute terms it will have declined in its share of total population.

Projection B assumes that the long-term annual average migration loss of 1,000 continues, resulting in a decline of 4,700 in the South-West population by 1986. The overall fall is composed of a decrease of 5,200 people in the working age group and a slight increase in both the younger and older age groups.

Projection C assumes that the rather higher migration loss of recent years, 1,200 per year, continues and gives a population decline of 8,800 with the main loss again being in the working age group.

Projection D assumes that net emigration falls from its recent high level in line with the improvement expected in Scottish emigration. If this improvement can be achieved, then despite a short-term loss there would be an increase of population of some 5,000 by 1986.

10 If migration were to continue at the long-term average of 1,000 per year the age structure of the region in 1986 would still be very similar to the projected 1986 Scotland age structure as can be

seen in Table 8. Provided, therefore, migration does not increase substantially above that level, it is unlikely that any serious imbalance will develop in the region's age structure.

11 Although the study area as a whole is unlikely to lose its balanced age structure, there are subdivisions within the South-West where the proportion of retired persons is exceptionally high and where continued decline in the population of working age could have serious consequences in the future. These areas are noted in Chapter 2.

12 Since the preceding paragraphs of this Appendix were written and the projections prepared, 1969 mid-year population estimates have been published by the Registrar General. These, together with the recently published statistics of births and deaths, provide further evidence of a post-1966 deterioration in the population situation. They have been included in the figures used in the Summary and in Chapter 1.

Population Change 1968-69 -880; natural increase +490; net migration -1,370.

PROJECTIONS OF POPULATION OF THE SOUTH WEST

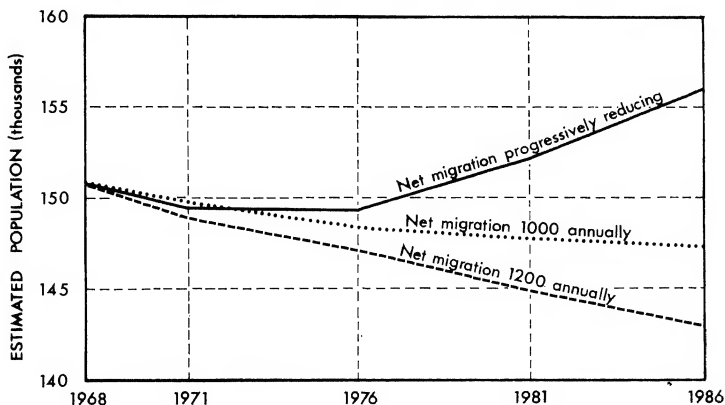


TABLE 1

1951-1961							
	Total population 30th June 1951	Change	%	Natural increase	%	Net migration	%
Tayside	456,300	-1,200	-0.2	19,700	4.3	-20,900	-4.5
Borders	113,100	-7,100	-6.3	900	0.8	-8,100	-7.1
Highlands	288,900	-9,200	-3.2	7,100	2.4	-16,300	-5.6
North-East	468,200	-12,800	-2.7	28,000	5.9	-40,800	-8.7
South-West	155,000	-1,400	-0.9	9,000	5.8	-10,400	-6.7
Scotland	5,169,000	57,100	1.1	338,600	6.5	-281,600	-5.4

TABLE 2

1961-1968							
	Total population 30th June 1961	Change	%	Natural increase	%	Net migration	%
Tayside	455,200	-5,100	-1.1	14,700	3.2	-19,770	-4.3
Borders	105,900	-3,200	-3.0	700	0.6	-3,900	-3.7
Highlands	279,700	-2,700	-0.9	6,900	2.4	-9,600	-3.4
North-East	455,400	-7,800	-1.7	18,600	4.0	-26,400	-5.7
South-West	153,600	-1,800	-1.2	5,900	3.8	-7,700	-5.0
Scotland	5,226,100	-8,800	-0.1	263,400	5.0	-272,100	-5.2

Source: Registrar General

TABLE 3

	Population 1961	Population 1966	Change 1961/66	% Change	Natural increase 1961/66	% N.I.	Net migration	% Net migration
Burghs	72,581	74,028	+1,447	+2.0	+1,860	+2.6	-413	-0.6
Landward Areas	83,797	82,179	-1,618	-1.9	+2,735	+3.3	-4,353	-5.2

Source: Registrar General's Annual Estimates

TABLE 4

Age Structure 1951-61-66

	South-West		Scotland	
	1951A	1961A	1966B	1966
0-14	24.4	26.0	25.3	25.8
15-59/64	62.6	59.8	59.8	60.0
60-65 +	13.1	14.3	14.9	14.2

A = Study Area

B = Economic Planning Region

Source: Census 1951/61/66

TABLE 5**Number of Females per 100 Males 1966**

Economic Planning Region	Ratio
West Central Scotland	107
Falkirk/Stirling	103
Edinburgh	110
Tayside	111
Borders	110
South West	104
North East Highlands	109
Highlands	105
Scotland	108

*Source: Census 1966***TABLE 6****Population Projection 1966 — 1986 (Assuming Continued Migration at 1,000 Annually after 1968)**

	1966		1976		1986		Change 1966 to 1986	
	No.	%	No.	%	No.	%	No.	%
Under 15	38.7	25.3	38.2	25.5	38.8	26.1	0.1	0.2
15-44	60.4	39.5	59.0	39.4	62.4	42.1	2.0	3.3
45-59/64	31.1	20.3	28.7	19.1	23.9	16.1	-7.2	-23.1
60-65 +	22.7	14.8	23.7	15.8	23.1	15.5	0.4	1.7
TOTAL	152.9		149.6		148.2		-4.7	-3.1

TABLE 7**Population Projection 1966 — 1986 (Assuming no Migration)**

	1966		1976		1986		Change 1966 to 1986	
	No.	%	No.	%	No.	%	No.	%
Under 15	38.7	25.3	40.3	25.4	44.2	26.0	5.5	14.2
15-44	60.4	39.5	64.3	40.6	73.6	43.3	13.2	21.8
45-59/64	31.1	20.3	29.9	18.8	28.1	16.5	-3.0	-9.6
60-65 +	22.7	14.8	23.8	15.0	23.8	14.0	1.1	4.8
TOTAL	152.9		158.3		169.7		16.8	10.9

*Source: Registrar General***TABLE 8****Age Structure of South West and Scotland 1966 and 1986**

Age	1966		1986	
	South West	Scotland	South West	Scotland
0-14	25.3	25.0	26.1	26.6
15-59/64	59.8	60.0	58.2	57.8
60-65 +	14.9	14.2	15.5	15.6

Source: Registrar General

Population Projections

These projections have been produced by General Register Office on behalf of the Scottish Development Department.

1 Area

The Area comprises Kirkcudbright County, Wigtown County; Dumfries County excluding Langholm burgh and district of county; and Girvan burgh and district of county from Ayr County.

2 Basis

The population enumerated in the area at the census of 1961 corrected for usual residence and converted to *total* population. This population has been adjusted for all known and estimated changes between census date 1961 and June 1968 including information obtained from the 1966 sample census. The populations in this paper have, after projection, been re-adjusted to *home* population.

3 Assumptions

Death Rate: Death rates are based on recent experience in the area and are then assumed to decline in sympathy with the assumptions in the Government Actuaries' 1968-based projection for Scotland. This assumes a decline to about one half of current rates after 20 years at young ages, and progressively smaller declines as age advances.

Fertility: As in the case on mortality, the fertility reflects the assumptions incorporated in the Government Actuaries' 1968-based projection but maintains the difference in level between local and Scottish rates.

Migration: Four different sets of migration have been used to show the effect on the population of a range of migration levels. For convenience, these have been labelled A, B, C and D.

Projection A: No migration after mid-1968.

Projection B: A net loss of 1,000 per annum after mid-1968 through migration. This has been roughly the average experience over the past few years.

Projection C: A net loss of 1,200 per annum after mid-1968. This has been the highest level experienced in recent years.

Projection D: This is an example of the type of migration level that could be expected to produce an increase over mid-1968 of about 5,000 in the population of the area. The net loss through migration was assumed as follows:

1968-71		1971-76	
		71/72	1,000
		72/73	1,000
68/69	1,200	73/74	900
69/70	1,100	74/75	700
70/71	1,100	75/76	600
	3,400		4,200
1976-81		1981-86	
76/77	500	81/82	200
77/78	400	82/83	200
78/79	400	83/84	200
79/80	300	84/85	200
80/81	300	85/86	200
	1,900		1,000

These projections do not attempt to forecast the population of the area, but rather to show the type of situation that could develop given the assumptions outlined above.

TABLE A**Estimated Home Population Projected to Mid-1986****BOTH SEXES***(Thousands)*

South West	Projection A	Projection B	Projection C	Projection D
Estimated Home Population Mid-1968	150.6	150.6	150.6	150.6
Natural Increase	+2.0	+1.9	+2.1	+2.1
Net Migration	—	-3.0	-3.6	-3.4
Estimated Home Population Mid-1971	152.6	149.5	149.1	149.3
Natural Increase	+4.5	+3.9	+3.9	+4.1
Net Migration	—	-5.0	-6.0	-4.2
Estimated Home Population Mid-1976	157.1	148.4	147.0	149.2
Natural Increase	+5.4	+4.2	+4.0	+4.5
Net Migration	—	-5.0	-6.0	-1.9
Estimated Home Population Mid-1981	162.5	147.6	145.0	151.8
Natural Increase	+5.9	+4.4	+3.8	+4.8
Net Migration	—	-5.0	-6.0	-1.0
Estimated Home Population Mid-1986	168.4	147.0	142.8	155.6

TABLE B**Estimated Home Population Projected to Mid-1986****MALES***(Thousands)*

South West	Projection A	Projection B	Projection C	Projection D
Estimated Home Population Mid-1968	73.3	73.3	73.3	73.3
Natural Increase	+1.0	+1.0	+1.0	+1.1
Net Migration	—	-1.6	-1.9	-1.8
Estimated Home Population Mid-1971	74.3	72.6	72.4	72.5
Natural Increase	+2.7	+2.3	+2.4	+2.5
Net Migration	—	-2.7	-3.2	-2.3
Estimated Home Population Mid-1976	77.0	72.3	71.5	72.7
Natural Increase	+3.1	+2.5	+2.4	+2.7
Net Migration	—	-2.7	-3.2	-1.0
Estimated Home Population Mid-1981	80.0	72.1	70.7	74.4
Natural Increase	+3.4	+2.6	+2.3	+2.9
Net Migration	—	-2.7	-3.2	-0.5
Estimated Home Population Mid-1986	83.4	72.0	69.8	76.7

TABLE C

Estimated Home Population Projected to Mid-1986

FEMALES

(Thousands)

South West	Projection A	Projection B	Projection C	Projection D
Estimated Home Population Mid-1968	77.3	77.3	77.3	77.3
Natural Increase	+1.0	+0.9	+1.1	+1.1
Net Migration	—	-1.4	-1.7	-1.6
Estimated Home Population Mid-1971	78.3	76.9	76.7	76.8
Natural Increase	+1.9	+1.5	+1.5	+1.6
Net Migration	—	-2.3	-2.8	-1.9
Estimated Home Population Mid-1976	80.1	76.1	75.5	76.5
Natural Increase	+2.3	+1.7	+1.5	+1.8
Net Migration	—	-2.3	-2.8	-0.9
Estimated Home Population Mid-1981	82.5	75.6	74.3	77.4
Natural Increase	+2.6	+1.8	+1.5	+2.0
Net Migration	—	-2.3	-2.8	-0.5
Estimated Home Population Mid-1986	85.0	75.1	73.0	78.9

TABLE D

South-West Region—Estimated Home Population by Sex and Age, Projected to Mid-1986

(Thousands)

South West	Total	Under 15		15-44		45-64	45-59	65 +	60 +
		Males	Females	Males	Females	Males	Females	Males	Females
PROJECTION A									
1968 No.	150.6	19.7	18.4	29.3	29.0	16.9	13.9	7.4	16.0
per 1,000	1,000	131	122	195	193	112	92	49	106
1971 No.	152.6	20.3	18.9	29.9	29.7	16.7	13.6	7.4	16.0
per 1,000	1,000	133	124	196	195	109	89	48	105
1976 No.	157.1	21.0	19.3	32.0	31.3	16.3	13.4	7.7	16.1
per 1,000	1,000	134	123	204	199	104	85	49	102
1981 No.	162.5	21.9	20.0	34.5	33.5	15.8	13.0	7.8	16.0
per 1,000	1,000	135	123	212	206	97	80	48	98
1986 No.	168.4	23.1	21.1	36.9	35.6	15.7	12.3	7.7	16.1
per 1,000	1,000	137	125	219	211	93	73	46	96
PROJECTION B									
1968 No.	150.6	19.7	18.4	29.3	29.0	16.9	13.9	7.4	16.0
per 1,000	1,000	131	122	195	193	112	92	49	106
1971 No.	149.5	20.0	18.5	28.8	28.9	16.5	13.5	7.4	16.0
per 1,000	1,000	134	124	193	193	110	90	49	107
1976 No.	148.4	19.9	18.3	29.1	28.9	15.6	12.9	7.7	16.0
per 1,000	1,000	134	123	196	195	105	87	52	108
1981 No.	147.6	20.0	18.2	30.0	29.6	14.4	12.0	7.7	15.8
per 1,000	1,000	136	123	203	201	98	81	52	107
1986 No.	147.0	20.3	18.5	30.9	30.4	13.2	10.6	7.5	15.6
per 1,000	1,000	138	126	210	207	90	72	51	106

TABLE E

South-West Region—Estimated Home Population by Sex and Age, Projected to Mid-1986

(Thousands)

South-West	Total	Under 15		15-44		45-64	45-59	65 +	60 +
		Males	Females	Males	Females	Males	Females	Males	Females
PROJECTION C									
1968 No. per 1,000	150.6 1,000	19.7 131	18.4 122	29.3 195	29.0 193	16.9 112	13.9 92	7.4 49	16.0 106
1971 No. per 1,000	149.1 1,000	19.7 132	18.3 123	28.6 192	28.8 193	16.6 111	13.4 90	7.4 50	16.2 109
1976 No. per 1,000	147.0 1,000	19.3 131	17.8 121	28.5 194	28.6 195	15.8 107	12.9 88	7.9 54	16.2 110
1981 No. per 1,000	145.0 1,000	19.1 132	17.4 120	28.8 199	28.9 199	14.8 102	12.1 83	8.1 56	15.8 109
1986 No. per 1,000	142.8 1,000	19.2 134	17.5 123	29.0 203	29.3 205	13.8 97	10.7 75	7.8 55	15.5 109
PROJECTION D									
1968 No. per 1,000	150.6 1,000	19.7 131	18.4 122	29.3 195	29.0 193	16.9 112	13.9 92	7.4 49	16.0 106
1971 No. per 1,000	149.3 1,000	19.7 132	18.4 123	28.7 192	28.9 194	16.6 111	13.4 90	7.4 50	16.2 109
1976 No. per 1,000	149.2 1,000	19.7 132	18.1 121	29.2 196	29.1 195	15.9 107	13.0 87	7.9 53	16.3 109
1981 No. per 1,000	151.8 1,000	20.1 132	18.3 121	31.0 204	30.7 202	15.1 99	12.5 82	8.2 54	16.0 105
1986 No. per 1,000	155.6 1,000	21.1 136	19.2 123	33.0 212	32.4 208	14.6 94	11.4 73	7.9 51	15.9 102

TABLE F

South-West Region—Estimated Home Population Projected to Mid-1986

(Thousands)

PROJECTION A

Age	1968		1971		1976		1981		1986	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
0-4	6.6	6.1	6.8	6.2	7.4	6.8	7.8	7.1	8.0	7.3
5-9	6.8	6.3	6.8	6.4	6.7	6.1	7.4	6.8	7.7	7.0
10-14	6.3	6.0	6.7	6.3	6.8	6.4	6.7	6.1	7.4	6.8
15-19	6.1	5.8	5.9	5.8	6.5	6.3	6.6	6.4	6.5	6.1
20-24	5.9	5.6	6.4	6.2	5.7	5.8	6.3	6.3	6.4	6.4
25-29	4.4	4.3	5.1	4.9	6.5	6.2	5.8	5.8	6.5	6.3
30-34	4.0	4.1	4.1	4.0	5.1	4.9	6.6	6.2	5.8	5.8
35-39	4.3	4.5	4.1	4.2	4.1	4.0	5.1	4.8	6.5	6.2
40-44	4.6	4.7	4.4	4.7	4.0	4.1	4.1	3.9	5.1	4.8
45-49	4.6	4.8	4.6	4.7	4.3	4.6	4.0	4.1	4.0	3.9
50-54	4.0	4.4	4.0	4.4	4.5	4.6	4.2	4.5	3.9	4.0
55-59	4.4	4.8	4.2	4.6	3.8	4.2	4.3	4.4	4.0	4.4
60-64	3.9	4.4	3.9	4.5	3.7	4.3	3.4	4.0	3.8	4.2
65-69	3.1	4.0	3.1	3.9	3.2	4.1	3.0	3.9	2.8	3.6
70-74	1.9	3.2	2.1	3.3	2.3	3.2	2.3	3.5	2.3	3.3
75-79	1.3	2.3	1.2	2.3	1.4	2.4	1.4	2.4	1.5	2.6
80-84	0.7	1.4	0.7	1.3	0.5	1.4	0.7	1.5	0.7	1.5
85 +	0.4	0.7	0.3	0.8	0.3	0.7	0.2	0.8	0.4	0.9
All Ages	73.3	77.3	74.3	78.3	77.0	80.1	80.0	82.5	83.4	85.0

TABLE G

South-West Region—Estimated Home Population Projected to Mid-1986

PROJECTION B

(Thousands)

Age	1968		1971		1976		1981		1986	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
0-4	6.6	6.1	6.6	6.0	6.9	6.3	7.0	6.3	7.0	6.3
5-9	6.8	6.3	6.7	6.3	6.4	5.8	6.7	6.1	6.8	6.2
10-14	6.3	6.0	6.6	6.2	6.6	6.1	6.2	5.7	6.6	6.0
15-19	6.1	5.8	5.8	5.7	6.3	6.0	6.2	6.0	5.9	5.5
20-24	5.9	5.6	6.2	6.1	5.3	5.5	5.8	5.8	5.8	5.8
25-29	4.4	4.3	4.9	4.7	5.9	5.8	5.1	5.2	5.5	5.5
30-34	4.0	4.1	3.8	3.8	4.5	4.3	5.6	5.4	4.7	4.9
35-39	4.3	4.5	3.9	4.0	3.5	3.5	4.1	4.0	5.2	5.1
40-44	4.6	4.7	4.3	4.6	3.6	3.8	3.2	3.2	3.8	3.8
45-49	4.6	4.8	4.6	4.6	4.0	4.4	3.3	3.6	3.0	3.1
50-54	4.0	4.4	4.0	4.3	4.3	4.5	3.8	4.2	3.2	3.5
55-59	4.4	4.8	4.1	4.5	3.7	4.1	4.0	4.2	3.5	4.0
60-64	3.9	4.4	3.8	4.5	3.6	4.2	3.3	3.9	3.6	4.0
65-69	3.1	4.0	3.1	3.9	3.1	4.0	3.0	3.8	2.7	3.5
70-74	1.9	3.2	2.1	3.3	2.3	3.2	2.3	3.4	2.2	3.2
75-79	1.3	2.3	1.2	2.3	1.4	2.4	1.4	2.4	1.5	2.6
80-84	0.7	1.4	0.7	1.3	0.6	1.4	0.7	1.5	0.7	1.5
85 +	0.4	0.7	0.3	0.8	0.3	0.7	0.3	0.8	0.4	0.8
All Ages	73.3	77.3	72.6	76.9	72.3	76.1	72.1	75.6	72.0	75.1

TABLE H

South-West Region—Estimated Home Population Projected to Mid-1986

PROJECTION C

(Thousands)

Age	1968		1971		1976		1981		1986	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
0-4	6.6	6.1	6.5	5.9	6.7	6.1	6.7	6.1	6.6	6.0
5-9	6.8	6.3	6.7	6.3	6.2	5.7	6.5	5.9	6.4	5.9
10-14	6.3	6.0	6.5	6.1	6.4	6.0	6.0	5.5	6.2	5.7
15-19	6.1	5.8	5.7	5.7	6.1	5.9	6.0	5.8	5.5	5.3
20-24	5.9	5.6	6.1	6.0	5.1	5.4	5.5	5.6	5.4	5.5
25-29	4.4	4.3	4.7	4.6	5.7	5.5	4.7	4.9	5.1	5.2
30-34	4.0	4.1	3.8	3.8	4.3	4.2	5.3	5.2	4.3	4.6
35-39	4.3	4.5	3.9	4.1	3.5	3.6	4.0	4.0	5.0	5.0
40-44	4.6	4.7	4.3	4.6	3.7	3.9	3.3	3.4	3.8	3.8
45-49	4.6	4.8	4.6	4.6	4.1	4.4	3.5	3.7	3.1	3.2
50-54	4.0	4.4	4.0	4.3	4.4	4.4	3.9	4.2	3.4	3.5
55-59	4.4	4.8	4.1	4.5	3.7	4.1	4.1	4.2	3.6	4.0
60-64	3.9	4.4	3.8	4.5	3.6	4.2	3.2	3.8	3.7	3.9
65-69	3.1	4.0	3.1	3.9	3.2	4.0	3.0	3.7	2.7	3.4
70-74	1.9	3.2	2.1	3.3	2.4	3.2	2.4	3.4	2.2	3.1
75-79	1.3	2.3	1.2	2.4	1.4	2.5	1.6	2.4	1.6	2.6
80-84	0.7	1.4	0.7	1.3	0.6	1.5	0.8	1.6	0.8	1.5
85 +	0.4	0.7	0.3	0.9	0.3	0.8	0.3	1.0	0.5	1.0
All Ages	73.3	77.3	72.4	76.7	71.5	75.5	70.7	74.3	69.8	73.0

TABLE J

South-West Region—Estimated Home Population Projected to Mid-1986

PROJECTION D

(Thousands)

Age	1968		1971		1976		1981		1986	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
0-4	6.6	6.1	6.5	5.9	6.9	6.2	7.1	6.5	7.4	6.7
5-9	6.8	6.3	6.7	6.3	6.3	5.8	6.8	6.2	7.1	6.4
10-14	6.3	6.0	6.5	6.2	6.5	6.1	6.2	5.7	6.7	6.1
15-19	6.1	5.8	5.7	5.7	6.2	6.0	6.2	6.0	6.0	5.6
20-24	5.9	5.6	6.1	6.0	5.3	5.5	5.9	5.9	6.0	6.0
25-29	4.4	4.3	4.7	4.6	5.8	5.7	5.2	5.3	5.9	5.8
30-34	4.0	4.1	3.8	3.8	4.5	4.4	5.8	5.6	5.2	5.3
35-39	4.3	4.5	4.0	4.1	3.6	3.7	4.4	4.3	5.7	5.5
40-44	4.6	4.7	4.3	4.6	3.8	4.0	3.6	3.6	4.3	4.2
45-49	4.6	4.8	4.6	4.6	4.1	4.5	3.7	3.9	3.5	3.5
50-54	4.0	4.4	4.0	4.3	4.5	4.5	4.0	4.3	3.6	3.8
55-59	4.4	4.8	4.1	4.5	3.7	4.1	4.2	4.3	3.7	4.2
60-64	3.9	4.4	3.8	4.5	3.7	4.2	3.3	3.8	3.8	4.1
65-69	3.1	4.0	3.1	3.9	3.2	4.0	3.0	3.8	2.7	3.5
70-74	1.9	3.2	2.1	3.3	2.4	3.2	2.4	3.4	2.3	3.2
75-79	1.3	2.3	1.2	2.4	1.4	2.5	1.6	2.4	1.6	2.6
80-84	0.7	1.4	0.7	1.3	0.6	1.5	0.8	1.6	0.9	1.5
85 +	0.4	0.7	0.3	0.9	0.3	0.8	0.3	1.0	0.5	1.0
All Ages	73.3	77.3	72.5	76.8	72.7	76.5	74.4	77.4	76.7	78.9

Short-Term Employment Prospects In Main Industries

PRIMARY INDUSTRIES

Agriculture (12·4% of employment in the region in 1968)

1 In the South-West agriculture is the most important single industry in terms of production and employment, but as in the rest of the country it has experienced a reduction in its labour force. The combined factors of current rationalisation and modernisation are expected to continue this trend. Over the past 5 years this reduction has been slightly less than the Scottish rate (some 28% compared with 30%), possibly a result of the predominance of dairying and stock raising where it is less easy to mechanise and, therefore, necessary to retain workers. There is no reason to expect that the rate of decline will be much less than it has been since 1963; the loss could well be of the order of 1,500 in the next 5 years with the effects being felt mainly in Wigtown and Kirkcudbright counties, notably in the Machars. Generally, however, the expected further decline in employment will be both gradual and widespread so that it is not likely to create significant resources upon which new industrial employment could be based in any particular locality.

Forestry (2·3% of employment in the region in 1968)

2 The introduction in recent years of new techniques and increased mechanisation has resulted in an appreciable rise in productivity and consequential decline in labour requirements within the forests. There are at present about 530 directly employed by the Forestry Commission in the area (one-third reduction compared with 1964) and in addition some 100 men are employed by timber merchants and contractors. A reasonable estimate for 1976 would be 600 and 110 respectively. Recently there has been substantial activity in the private acquisition of land for forestry and some 300 men are employed in this sector. The employment of 300 men in this recent development has more than offset the reduction in directly employed Commission strength and, if it continues in conjunction with planned Commission programmes in the area, will achieve a steady growth in the labour force required in the forests.

3 Forestry has had a stabilising influence in helping to retain population in the more remote rural and upland areas, and will no doubt continue to do so. Consideration, however, could be given to extending forestry activity to assist areas which so far have not benefited at all, *eg* the Machars. Forestry Commission policy is now to have their workers housed in existing communities.

Fishing (0·3% of employment in the region in 1968)

4 It is not expected that there will be any substantial development in the catching side of sea fisheries. Shellfish processing might be expanded with supplies drawn from outside the area. Associated small scale boat building and boat repairing enterprises are doing well but no major expansions can be expected.

Coal Mining (2·1% of employment in the region in 1968)

Sanquhar and Kirkconnel Area (40% of Exchange Area employment in 1968)

5 The present employment in the area is confined to one small pit, the Roger, employing 92 men (48 from Kirkconnel, 41 from Sanquhar). The rest of the labour force travels to Barony Highhouse and Killoch and these pits employ 22 men from Kirkconnel and 50 from Sanquhar. Closure of the Roger pit is not expected to cause employment problems as long as the men are willing to travel to fill outstanding vacancies in the Cumnock area. Of the men presently employed at Roger over 50% are 45 and over.

Girvan Area (10·6% of Exchange Area employment in 1968)

6 The present labour force is employed in 2 collieries which are both small units: because of continuing rationalisation in the industry, their future is doubtful. Prospects for redeployment in other jobs in mining are not good so that by the early 1970s some 245 men (142 under the age of 45) may require alternative employment.

Quarrying (0·4% of employment in the region in 1968)

7 Though the number directly employed in quarrying is not large, under 200, the region's building material resources give rise to another 300 jobs in manufacturing activities. The resource-tied locations of these industries result in useful employment opportunities in rural areas where other jobs are scarce. Future prospects are based on a limited increase of employment in Creetown, where three-quarters of the labour force is situated, and stabilisation of the existing labour force elsewhere.

Service Industry (49·2% of employment in the region in 1968)

Transport (5·1% of employment in the region in 1968)

8 The rundown in railway employment is now largely complete and it can be assumed that no

significant numbers will become available for other employment.

Other Services (44.1% of employment in the region in 1968)

9 The trend is towards increasing numbers, particularly of women, in this sector. Hospital services (2,000), education, hotels and catering, distributive trades and employment in tourist activities should continue to grow. In the area of the main regional service centre, Dumfries, the growth of employment in this sector has been substantial, 500 more women being employed in 1966 than in 1961, and growth of this order should continue.

Construction Industry (8.3% of employment in the region in 1968)

10 The level of construction employment has fallen away sharply from its high 1966 level due in part to the post-1966 squeeze and to the reduction in local authority housing programmes because rehousing targets have been largely achieved. Prospects for further growth will depend on a resurgence in industrial development and public investment in infrastructure.

Manufacturing Industry (25.2% of employment in the region in 1968)

11 Although the manufacturing sector is becoming of increasing importance in the South-West's employment structure, providing 25% of employment in 1968 compared with less than 20% in 1961, it is still small by Scottish standards (34% of total).

Highest proportions of manufacturing employment are found in the eastern sector and the Girvan catchment area (30%). In the Central and Western sectors less than 20% of all employment is in manufacturing, much of it consisting of processing of primary products, notably milk products, timber and building materials. A welcome measure of diversification has developed with the introduction of several new projects in the 1960s and in the Central sector this has led to an appreciable improvement in job prospects for men. The Newton Stewart area has not attracted any new developments, either male or female-employing.

12 The Eastern sector has a wide and varied range of manufacturing activities and future prospects are fairly good. Employment is concentrated in a few large chemicals, plastics and rubber processing plants, which provide several thousand valuable male jobs; these are supplemented by a small but thriving engineering sector and a buoyant female-employing hosiery industry.

13 There are thus good prospects for continued growth in manufacturing industry. Recent progress and known future developments may bring about 1,000 more jobs for women and 500 or so more for men by the mid-1970s compared with 1966; efforts to attract more new industry, particularly to the Special Development Areas of Sanquhar and Girvan, could raise the total further. Male employment growth will, as in the past, be largely concentrated in the Eastern sector; provision of adequate job replacement for men is likely to remain a key problem in Stranraer, Newton Stewart and the Special Development Areas.

Employment Structure and Trends in South-West Scotland

STATISTICAL NOTE—TABLES

1 The following tables are based on the Department of Employment and Productivity's employment estimates for employment exchange areas. The estimates are made in June each year. They exclude self-employed workers. Part-time workers are counted as full units. For the purposes of these tables the unemployed have also been excluded.

2 The local estimates exclude Post Office workers and Civil Servants other than short-term temporary staff and certain other employees whose place of work within Scotland is not known. Estimates for the South-West Planning Region in Table 1 also exclude Post Office workers and Civil Servants but include an allowance for workers of unknown workplace. All these groups are included in the Scottish estimates, given for comparison purposes in Table 1.

3 Local employment estimates and the planning region figures derived from them are subject to wide margins of error. Estimates of year-to-year

changes in industries and areas employing fewer than 5,000 workers should be treated with great caution.

4 Following the introduction of the Selective Employment Tax an abnormally large number of establishments had a change of industrial classification between 1966 and 1967, mostly into manufacturing from construction and service industries. These changes distort the pattern of industrial employment change between 1966 and 1968. For Scotland estimates have been made of the amount of spurious industrial change involved and revised 1966 estimates have been produced. This was not possible for smaller areas. Table 1 expresses the Scottish 1966 to 1968 percentage change:

(a) Using the original 1966 estimates (unadjusted).

(b) Using the revised 1966 estimates (adjusted).

The difference between (a) and (b) indicates the order of adjustment that might be applied to the 1966-68 change in the South-West.

TABLE 1

Structure of and Trends in Employment in South-West Scotland compared with Scotland:
1968 showing change over the period 1961/66 and change 1966/68

	Employees in Employment June 1968 South-West Planning Region			Each Industry (total) as percentage of grand total		Change (thous.) in South-West 1961-66			Percentage change in South-West, 1961-1966			Change (thous.) 1966-68			Percentage change 1966-68		
	M	F	T	South- West	Scot- land	M	F	T	T	T	T	M	F	T	T	T	T
Grand total: all Industries and services	28.4	17.3	46.7	100	100	-2.7	+0.2	-2.6	-4½	+2	-1.9	-1.9	-4	-3	-3	-3	-3
Main Sectors																	
A Primary	7.3	0.8	8.1	17	5	-3.0	-0.3	-3.3	-27	-28	-0.7	-0.1	-0.8	-9	-15	-15	-4
B Manufacturing	8.0	3.7	11.8	25	34	+0.7	+0.3	+1.0	+0	-1	+0.6	+0.2	+0.9	+8	-2	-4	-4
C Construction	3.7	0.2	3.9	8	9	+0.2		+0.3	+7	+14	-0.8		-0.8	-17	-4	Nil	Nil
D Services	10.4	12.6	23.0	49	51	-0.7	+0.2	-0.5	-2	+6	-1.1	-0.2	-1.3	-5	-2	-1	-1
Industry Orders																	
A Agriculture, Forestry and Fishing	6.2	0.8	6.9	15	3	-2.2	-0.3	-2.5	-26	-23	-0.4		-0.4	-6	-12	-9	-9
Mining and Quarrying	1.2		1.2	3	2	-0.8		-0.8	-27	-35	-0.3		-0.4	-23	-19	-19	-19
B Food, Drink and Tobacco	7.3	0.8	8.1	6	5			+0.1	+4	+2½	+0.4	+0.1	+0.5	+22	+1	-3	-3
Chemicals and Allied Industries	1.8	0.8	2.6	6	2	+0.5	+0.1	+0.5	+22	-9	+0.1	+0.1	+0.1	+5	Nil	Nil	Nil
Metal Manufacture					2					-10					-11	-11	-11
Engineering and Electrical Goods	2.5	0.3	2.8	6	9	+0.2		+0.2	+18	+10				-4	+½	-3	-3
Shipbuilding and Marine Engineering					2					-25					-4	-4	-4
Vehicles	0.2		0.2	2	2	-0.1		-0.1	-33	+16					-5	-11	-10
Metal Goods not elsewhere specified	0.3		0.3	1	1	+0.1		+0.1	+50	-½				+3	-4	-4	-4
Textiles	0.3	1.3	1.5	3	4			-0.1	-1	-6	-6		-0.2	-0.2	-10	-7	-8
Leather, Leather Goods and Fur					1					+4				+0.2	+0.2	+75	Nil
Clothing and Footwear	0.1	0.5	0.5	1	1			+0.2	+0.3	+6	+0.1			+0.1	+30	+7	-2
Bricks, Pottery, Glass & Cement, etc.	0.3		0.3	1	1					+6	+0.1			+0.2	+31	+20	+9
Timber, Furniture, etc.	0.7	0.1	0.8	2	1	-0.1		-0.1	-14	-3½	+0.2			+0.2	+31	+20	+9
Paper, Printing, Publishing	0.2	0.1	0.3	1	3			-0.1	-33	+1				+8	-1	-1	-1
Other Manufacturing Industries	0.6	0.5	1.1	2	1	+0.1		+0.1	+10	-1				-½	+4	+6	+6
D Gas, Electricity and Water	0.8	0.1	0.9	2	1	-0.2		-0.1	-10					-1	-5	-5	-5
Transport and Communications	1.9	0.5	2.4	5	7	-1.0	-0.2	-1.2	-32	-10	-0.1		-0.1	-3	-4	-4	-4
Distributive Trades	1.9	3.0	4.9	10	12	-0.1	-0.2	-0.2	-3	+1½	-0.8	-0.3		-1.1	-18	-8	-6
Insurance, Banking and Finance	0.5	0.3	0.8	2	2	+0.1	+0.1	+0.1	+17	+0.1				+0.1	+15	+6	+6
Professional and Scientific Services	1.7	5.1	6.9	15	13	+0.2	+0.8	+1.0	+20	+18	+0.1	+0.7	+0.8	+13	+6	+6	+6
Miscellaneous Services	1.9	3.0	5.0	11	8	-0.1	-0.1	+0.1	+2	+11		-0.4	-0.4	-7	-6	-6	-6
Public Administration and Defence	1.6	0.5	2.1	4	6	+0.1	-0.1			+7	-0.3	-0.3	-0.6	-22	+6	+6	+6

N.B.—These figures do not add up due to rounding

TABLE 2

Distribution of total employment in South-West showing changes by study area 1961/68

Study Area	Employees in employment 1968			Each area as percentage of South-West Regional total			Change in Employees in employment 1961-66			Percentage change 1961-66			Change in Employees in employment 1966-68			Percentage change 1966-68		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Dumfries/Annan	16.4	10.4	26.8	57	63	59	-0.4	+0.6	+0.2	-2	+5½	+½	-0.8	-0.2	-1.0	-5	-2	-4
Castle Douglas	3.8	1.8	5.6	13	11	12	-0.5		-0.5	-12		-8	-0.1	-0.2	-0.3	-2½	-10	-5
Newton Stewart	2.0	1.1	3.1	7	7	7	-0.4	+0.1	-0.3	-16	+5	-10	-0.1	Nil	Nil	-5	Nil	Nil
Stranraer	3.5	1.9	5.4	12	11	12	-0.5	+0.1	-0.4	-12	+4	-7	-0.1	+0.1	Nil	-3	+5½	Nil
Sanquhar	1.2	0.5	1.6	4	3	3	-0.5		-0.5	-27	-4	-23	-0.2	+0.1	-0.2	-14	+25	-11
Girvan	1.7	0.9	2.6	6	5	6	+0.1	-0.1		+2½	-10	-1	-0.6	+0.1	-0.5	-26	+12½	-16

N.B.—These figures exclude certain categories of workers whose workplace within Scotland is not known. Allowance is made for these in Regional figures in Table 1 which, therefore, differ from the sum of the Area totals
These figures do not add up due to rounding

Source: DEP local employment estimates
(excluding self-employed)

TABLE 3

Male: Female Balance of Employment and Broad Industrial Composition of Employment by Study Areas (1968 data)

	Total employees in employment in area 1968	Males	Females	Primary	Manufacturing	Construction	Services
		as percentage of total employment		as percentages of total employment in all industries			
Dumfries (inc. Annan)	26,800	61	39	11	30	8	51
Castle Douglas	5,600	68	32	26	16	12	47
Newton Stewart	3,100	65	35	33	19	9	39
Stranraer	5,400	65	35	18	15	10	58
Sanquhar	1,600	75	25	49	20	3	28
Girvan	2,600	65	35	25	30	4	41

Employment Forecasts

Summary

Chapter 1 quotes an estimate of jobs for men required in South-West Scotland by 1976 if migration is to fall in line with the improvements expected for Scotland as a whole and the unemployment differential between the South-West and the rest of Scotland is to be eliminated. The methods are summarised here and the results outlined. Following paragraphs describe the methods in more detail.

- (a) The number of men available for work in 1976 was calculated from the population projections given in the annex to Appendix 1.
- (b) Estimates were made of the probable amount of unemployment in June 1976, taking into account past trends and the assumptions underlying the population projections (para. 9).
- (c) The number of jobs required for men in employment (including self-employed) was derived by subtraction.
- (d) The number of jobs available in June 1976 was forecast on the basis of Government Departments' information about regional prospects in primary and manufacturing industries, and on the basis of recent employment trends (paras. 10-12).
- (e) Comparison of forecast jobs available with those required revealed the extent of shortfall needing to be made up from additional job opportunities for men.

TABLE 1

	1976 projection		
	B	C	D
Number of men available for work	40,500	40,200	40,900
Numbers unemployed	1,100	1,300	900
Numbers for whom jobs required	39,400	38,900	40,000
Number of jobs forecast	38,800	38,800	38,800
Job shortfall	600	100	1,200

Results

1 To contain migration at 1,000 per year, 600 additional jobs for men are needed by 1976. The need rises to 1,200 if migration is to be progressively reduced in line with improvements envisaged for Scotland as a whole.

2 New employment will have to come almost entirely from new basic activities, *i.e.* those which add to the region's income; by and large this means

manufacturing. These new manufacturing job requirements are additional to a continuing net increase of 100 manufacturing jobs for men per year between 1968 and 1976 already built in to the employment forecasts. In other words to achieve the 'best' population projection D a total of 2,000 new jobs for men is required in the South-West between 1968 and 1976, an average of 250 per year.

3 Only a slight net employment increase for men is likely in existing industries as a result of new developments. Although new industries and the extra money they provide will create additional business for local employers they will also tend to hasten rationalisation in existing industries by drawing workers out of under-productive employment. The South-West's low average earnings—at least 15% below the British average for adult male employees in 1968—indicate considerable scope for such rationalisation.

Supply of Male Labour 1968 to 1976

4 The working population is determined by the size of the population of working age and the proportion of that population which is available for work (the activity rate). The population of working age is defined for this purpose as those aged 15 and over. The main factor affecting activity rates for men is age; activity falls off after the age of 60, with a sharp reduction after 65. In the youngest working age groups full-time education substantially reduces the numbers available for work.

5 The level of net population migration, which affects both the size and age structure of the working-age population, is an important determinant of the total male labour supply in the South-West. For this reason separate labour supply forecasts were made for each population projection using standard activity rates for each five year age group. (See appendix 1.)

6 For men aged 25 and over activity rates within each five year age group are assumed to remain constant throughout the survey period. This is the basis of UK working population projections for the period 1967-1981 published in the March 1969 Employment and Productivity Gazette. These activity rates indicate the labour supply at points of high national labour demand.

7 Below the age of 25, longer full-time education, including the raising of the school leaving age, may result in the withdrawal of over 400,000 male workers from the UK labour force between 1967 and 1977. Assuming that the South-West's share

TABLE 2

Estimated Male Working Population in South-West Scotland in 1968 and 1976

Age Group	Home population (thousands)				Economic activity rate (1966 Census)	Estimated numbers economically active (thousands)			
	1968	1976 (projection)				1968	1976 (projection)		
		B	C	D			B	C	D
15-19	6.1	6.3	6.1	6.2	601	8.1 ²	6.8 ²	6.6 ²	6.7 ²
20-24	5.9	5.3	5.1	5.3	761				
25-29	4.4	5.9	5.7	5.8	97.7	4.3	5.8	5.6	5.7
30-34	4.0	4.5	4.3	4.5	99.5	4.0	4.5	4.3	4.5
35-39	4.3	3.5	3.5	3.6	96.7	4.2	3.4	3.4	3.5
40-44	4.6	3.6	3.7	3.8	98.0	4.5	3.5	3.6	3.7
45-49	4.6	4.0	4.1	4.1	98.0	4.5	3.9	4.0	4.0
50-54	4.0	4.3	4.4	4.5	95.3	3.8	4.1	4.2	4.3
55-59	4.4	3.7	3.7	3.7	96.0	4.2	3.6	3.6	3.6
60-64	3.9	3.6	3.6	3.7	85.0	3.3	3.1	3.1	3.1
65 +	7.4	7.7	7.9	7.9	23.0	1.7	1.8	1.8	1.8
Total 15 +	53.6	52.4	52.1	53.1		42.5	40.5	40.2	40.9

Notes: (1) Hypothetical activity rates expressing 1966 Census figures of numbers economically active as a percentage of 1966 home population estimate.

(2) The estimated numbers economically active in the 15-24 age group allow for 'education effects' of -100 in the 1968 figures and -1,000 in the 1976 forecasts (see para. 7).

of this decline is in direct proportion to its share of the total UK male labour force, the regional supply would be reduced by 1,000 between 1967 and 1976, more than 100 of this occurring by 1968.

8 Activity rate data were derived from 1966 census figures (10% sample) for South-West Scotland Census Region. The area covered is slightly different from the planning region but the effect on activity rates is unlikely to be significant. A further complication is that census population estimates differ in definition from the Registrar-General's figures of home population, on which the population projections for the study have been based. The latter show much larger numbers in the age groups 15 to 24. In these categories special activity rates were calculated by expressing census estimates of numbers economically active in the region as a percentage of the 1966 home population. The activity rates so derived were applied to the home population estimates for 1968 and to the four projections for 1976. They were then adjusted for the education effects mentioned above. The results indicate a substantial reduction in male labour supply on all three population bases.

Unemployment

9 The following male unemployment rates are assumed to prevail: (Table 3)

These estimates are based on the following assumptions that

(a) 1976 is a high point of national business activity.

(b) Scottish male unemployment in June 1976 equals the June 1966 level of 2.8%.

TABLE 3

	Population forecast		
	B 1,000 migrants p.a.	C 1,200 migrants p.a.	D migration reducing p.a.
Male unemployment rate, June 1976	3½	4¼	2¾
Numbers unemployed	1,100	1,300	900

(c) The ratio between South-West and Scottish average male unemployment is no higher than 1968 value of 1.5, i.e. male unemployment in the South-West is no more than 4¼% or 1,300 men unemployed.

(d) Lower unemployment rates are considered appropriate for projections B and D (Appendix 1) which assume a reduction in population migration from the high 1964-68 levels. Reduction in net population emigration from the South-West is likely to come about principally through improvement in the region's relative level of employment opportunity compared with elsewhere. This improvement would also result in a lower relative level of unemployment. The rates selected are a matter of judgment; for projection D (Appendix 1), which assumes a progressive reduction in migration in line with the drop envisaged for all Scotland, it seems reasonable to pose an unemployment rate no higher than the Scottish average.

Demand for Male Workers 1968 to 1976 (See Table 5 and Appendix 2)

10 For primary and manufacturing industries estimates were made of changes in demand for male workers between 1968 and 1973 on the basis of the appraisal of short term employment prospects (Appendix 2) which draws together Government Departments' information about trends in the region (no special survey was made). There was little specific information about regional construction and service employment trends but it was assumed that the rate of male employment growth (including self-employed) would equal the average Scottish rate for male employees over the 1968-73 period. The 1968/73 change in each sector was extrapolated to 1976 to allow comparison with estimates of the supply of labour available at that date.

11 1973 and 1976 were assumed to be points of relatively high national demand. Forecasts were made between points of differing demand conditions because of the nature of information available about future trends and in order to take account of recent changes in employment. Normally it is advisable to forecast net changes between points of similar demand but this is less important in the South-West than major industrial areas which are more vulnerable to cyclical swings of business activity.

12 The most difficult category to forecast is the self-employed, who made up more than a sixth of all men in employment in the South-West in 1966. However, more than half are engaged in agriculture and are taken account of specifically in employment forecasts. Most of the remainder are in construction and private services, chiefly retail, where a continuing decline in self-employment is foreseen.

13 Table 5 details the forecast employment changes by main industrial sector. The results are summarised below:

TABLE 4

Men available for work June 1968 (Census definition)	42,500
Wholly unemployed, June 1968	1,900
In employment, June 1968	40,600
Forecast employment change, 1968-76	-1,800
In employment, June 1976	38,800

(1) Estimated employment at June 1968 is based on the Census definition of employment (including self-employed) in order to produce an employment demand forecast comparable with those for supply. This estimate is much higher than the DEP estimate of employees in employment.

TABLE 5

Demand for Male Workers in South-West Scotland, 1968-76

Industrial section	1968/73	1973/76	1968/76
<i>Agriculture</i> : Estimate 1968-73 by Department of Agric. & Fisheries for Scotland, based on 1963-68 trends: -200 farmers; -1,150 full-time workers, -150 casual, seasonal, part-time workers	-1,500	-800	-2,300
<i>Forestry</i> : Forestry Commission employment to increase by 80 between 1968 and 1976. Increase in private forestry of +120	+100	+100	+200
<i>Coalmining</i> : Closure of Fauldhead colliery (1968) -700 jobs; remaining closures by 1973 -300 jobs	-1,000	-	-1,000
<i>Manufacturing</i> : Gains 1968-73 of 700, comprising net growth 1968-69 in main establishments and forecast jobs in prospect 1969-73, from new and expanding projects. Losses 1969-73 of 200, comprising rationalisation in primary ancillary industries, eg creameries and at Chapelcross Atomic Energy Establishment. <i>NB</i> The forecast assumes known new projects will expand on schedule and in full and that no unforeseen contractions will occur. No allowance has been made for other new projects arising within the period nor for the possibility of additional jobs for men arising from substitution of male for female labour. (This might happen in some industries, eg hosiery or rubber assuming higher demand for woman factory workers and progress towards equal pay.)	+500	+300	+800
<i>Construction and Services</i> : No factual regional information. 1968-73 growth assuming forecast Scottish rate of employee growth by industry: +300. Factors suggesting above average growth: Increased rate of factory employment development (mainly for women); further development of tourism; Benefits of DA and SDA status. Factors limiting growth: Decline of self employment in private services, centralisation of service provision. Population decline in mining and rural areas	+300	+200	+500
All industries and services	-1,600	-200	-1,800

Unemployment

1 In the mid-1950s unemployment was well below the Scottish average. Since then the region's basic industries of agriculture and coalmining have given employment to fewer and fewer men. The contraction in employment in the primary industries and in Defence establishments and rail services has steadily reduced the scope of work available for men. Between 1961 and 1966 unemployment in the South-West deteriorated markedly compared with the rest of Scotland and particularly in comparison with the other 'peripheral' regions. This deterioration occurred alongside the fastest rate of male employment loss of all peripheral regions (Table A). The unemployment percentage in the South-West as a whole is now one-and-a-half times as high as the Scottish average and two-and-a-half times the UK rate (Table B).

2 Unemployment is above average in all parts of the region but it is less acute in the East—in the Dumfries and Castle Douglas catchment areas. It is at its worst in the mining areas of Sanquhar and Girvan, both of which have been made Special Development Areas. Unemployment is also very high in Stranraer and Newton Stewart. Stranraer has had consistently high unemployment since closure of Defence establishments in the late 1950s; Newton Stewart has shown a steady deterioration with the accelerating reduction in agricultural employment, the mainstay of its many dispersed rural communities.

3 One of the obstacles in the way of a major reduction in the unemployment problem is the geographical distribution of unemployed workers throughout the region. The biggest concentration of unemployed resources is to be found in the more densely populated Eastern catchment area centred on Dumfries and Annan; although the actual numbers are biggest in this area, percentage unemployment rates are lower. This area accounts for 1,000 of the 2,000 or so men unemployed in the South-West during 1968. The second largest concentration is in Stranraer where the great bulk of the 350 unemployed workers live in or within easy reach of the Burgh of Stranraer itself. Colliery closures have led to substantial concentrations of unemployed men (over 200 apiece) at Sanquhar and

Girvan. In the Castle Douglas and Newton Stewart areas the unemployed, like the rest of the population, are very much more widely scattered. The problem is at its most extreme in Newton Stewart area where nearly all of the unemployed workers live in smallish communities scattered throughout the Southern Machars Peninsula. Public transport is limited and it is difficult for workers without access to other transport facilities to travel to jobs elsewhere in the Exchange Area.

4 The dominance of the contracting primary industries is reflected in the industrial experience of unemployed men (Table C) and one man in twelve is registered for farming or fishing occupations (Table D). The majority of those registered as unemployed fall within the unskilled category—although the proportion is smaller than for Scotland as a whole. Many of these are not able to do the heavy labouring work that is available. There are undoubtedly, however, many men of good calibre such as former farm workers and miners who could be readily trained within firms particularly for semi-skilled work which is usually the main requirement of new incoming firms. Table D shows the skill composition of the unemployed register which, apart from the important engineering and allied trades in which skills are scarce and the naturally higher proportion of agricultural workers, is not dissimilar from the Scottish picture although there is considerable variation between the catchment areas.

5 An age analysis of the unemployed registers reveals a higher proportion of over 60s in the S.W. than in Scotland—20 per cent compared with 15 per cent with the highest proportions in Castle Douglas (where there are some retired professional workers) and in Sanquhar and Girvan where older ex-miners are registered. The limited number of job opportunities in the region tends to favour the younger more physically active men. Nevertheless, over half the total register of men is under 45 years (Table E). Even the young men (18–24) who make up 17 per cent of the unemployed are vulnerable to seasonal influences which cause higher winter unemployment partly due to the dearth of sufficient manufacturing jobs to ensure regular all the year round employment (Tables E and F).

TABLE A

Change in Male Unemployment in South-West Planning Region Compared with Other Planning Regions in Scotland, 1961-1966 (Averages of January and June Wholly Unemployed Figures)

	Wholly unemployed males June-January average		Percentage change 1961-1966	Change in total male employees in employment mid 1961 to mid 1966
	1961	1966		
Scotland total	47,250	42,930	-9	-1
South-West planning region	1,290	1,540	+19	-8
<i>Other 'Peripheral' regions</i>				
Highlands	3,950	4,030	+2	-3
North-East	3,920	3,030	-23	- $\frac{1}{2}$
Borders	340	330	—	-4
<i>Central Belt regions</i>				
Glasgow	26,910	23,470	-13	-1 $\frac{1}{2}$
Edinburgh	5,870	6,140	+5	+ $\frac{1}{2}$
Falkirk/Stirling	1,160	1,390	+20	-1 $\frac{1}{2}$
Tayside	3,820	3,010	-21	-1 $\frac{1}{2}$

TABLE B

Unemployment in the South-West— Wholly Unemployed

	Total					Males					Females				
	1961	1966	1967	1968	1969	1961	1966	1967	1968	1969	1961	1966	1967	1968	1969
Wholly Unemployed in South-West Numbers	1,633	2,260	2,872	2,962	3,040	1,125	1,552	2,070	2,191	2,327	509	707	802	771	713
Percentage Rate	3.4	4.6	5.9	6.1	6.4	3.3	4.9	6.7	7.0	7.6	3.0	4.1	4.5	4.5	4.1
Scottish Percentage Rate	3.0	2.8	3.8	3.7	3.7	3.3	3.3	4.6	4.6	4.7	2.6	2.0	2.6	2.2	2.1
South-West Rate as Index of Scottish (-100)	113	164	155	165	173	100	148	146	152	162	115	205	173	205	191
1. Employment Exchange Areas in :															
Dumfries/Lockerbie Nos.	709	956	1,403	1,315	1,306	538	719	1,075	1,006	1,026	171	237	328	309	280
Annandale %	2.5	3.4	4.9	4.6	4.7	3.0	4.1	6.1	5.7	5.9	1.6	2.2	3.0	2.8	2.6
2. Nos.	197	234	287	302	308	160	169	203	198	220	38	64	84	104	88
Castle Douglas %	3.1	3.9	4.8	5.1	5.3	3.6	4.2	5.3	5.1	5.6	1.9	3.1	3.9	4.9	4.7
3. Nos.	147	205	270	243	250	101	143	170	160	169	46	62	100	83	81
Newton Stewart %	4.1	6.2	8.3	7.5	7.5	4.0	6.6	8.0	7.5	7.9	4.3	5.5	9.0	7.4	6.9
4. Nos.	442	430	492	515	543	296	279	320	352	378	146	151	172	163	165
Stranraer %	7.1	7.5	8.5	8.9	9.2	6.8	7.3	8.5	9.4	9.9	7.9	7.8	8.5	8.0	8.0
5. Nos.	117	204	182	300	384	44	101	114	236	326	73	103	68	64	58
Sanquhar %	4.8	10.3	9.1	14.9	21.1	2.2	6.7	7.7	16.0	25.6	15.8	21.8	12.8	6.0	10.7
6. Nos.	121	231	238	287	249	86	141	188	239	208	35	90	50	48	41
Girvan %	3.8	7.4	7.4	8.9	8.6	3.7	5.9	8.1	10.3	10.6	3.9	10.6	5.4	5.9	4.4

Figures shown are annual averages of monthly counts of numbers wholly unemployed

TABLE C

Industry of Last Employment of men Wholly Unemployed in South-West Scotland, June 1968

	Scotland	South-West P.R.	Dumfries catchment	Castle Douglas	Newton Stewart	Stranraer	Girvan	Sanquhar
	%	%	%	%	%	%	%	%
Agriculture, Forestry and Fishing	4	17	13	19	32	24	18	8
Mining and Quarrying	4	3	1	—	—	—	14	17
All Manufacturing	27	14	16	15	11	11	14	11
Construction	23	23	25	15	9	19	26	35
Transport Industries	7	8	8	12	8	6	4	8
Other services	25	27	29	30	34	31	19	10
Persons not industrially classified	8	8	8	9	7	9	5	11
Grand total all industries	100	100	100	100	100	100	100	100

TABLE D

Skill Composition of Unemployed Registers in South-West Scotland, Wholly Unemployed Men by Occupation for which Registered, June 1968

Occupations for which registered :	Scotland Total	South-West	Dumfries catchment	Castle Douglas	Newton Stewart	Stranraer	Girvan	Sanquhar
	%	%	%	%	%	%	%	%
Engineering and allied trades	8	4	4	3	1	3	5	3
Electrical skills	1	1	1	—	1	1	1	1
Other manufacturing skills	2	2	2	2	2	1	2	—
Construction trades, wood-working, painting and decorating	3	4	6	2	2	3	2	3
Transport occupations	8	9	9	13	9	14	6	7
Sales, warehouse, service, clerical, administrative and technical occupations	16	17	19	38	19	11	14	9
Farming and fishing occupations	2	8	7	15	16	9	9	3
Mining and quarrying occupations	—	1	—	—	—	—	9	1
Unskilled occupations	60	53	54	34	50	59	51	74
All occupations	100	100	100	100	100	100	100	100

Registered occupation may differ from occupation of last employment, eg if prospects of rejoining employment in former occupation are negligible.

TABLE E

Age Composition of Unemployed Men in South-West Scotland, January and July 1969

Area		18-24	25-44	45-59	60 and over	Total over 18
<i>South-West Region</i>						
Nos. in each	January	416	891	647	468	2,422
Category	July	358	729	599	422	2,108
<i>% in each category</i>						
<i>South-West Region</i>						
	January	17	37	27	19	100
	July	17	35	28	20	100
<i>Dumfries/Lockerbie/Annan</i>	January	19	40	25	16	100
	July	20	37	27	16	100
<i>Castle Douglas</i>	January	14	32	23	31	100
	July	13	34	23	30	100
<i>Newton Stewart</i>	January	22	30	31	17	100
	July	16	36	30	18	100
<i>Stranraer</i>	January	18	39	27	16	100
	July	17	34	31	18	100
<i>Sanquhar</i>	January	12	36	30	22	100
	July	10	31	34	25	100
<i>Girvan</i>	January	17	31	25	27	100
	July	20	29	24	27	100
<i>Scotland</i>	January	20	40	25	15	100
	July	20	40	25	15	100

TABLE F

Seasonal Variation in Unemployment in South-West Scotland

Area		1961	1962	1963	1964	1965	1966	1967	1968	1969
<i>Dumfries</i>	January	507	566	730	602	540	522	753	734	702
	July	368	469	466	448	445	449	743	633	737
<i>Lockerbie</i>	January	78	92	116	82	92	135	108	133	102
	July	30	54	51	48	50	55	109	89	74
<i>Annan</i>	January	126	134	285	245	230	267	254	285	264
	July	73	169	208	166	155	126	264	218	240
Sub-Total of above LOs	January	711	792	1,131	929	862	924	1,115	1,152	1,068
	(July)	471	692	725	662	650	630	1,116	940	1,051
<i>Castle Douglas</i>	January	205	220	231	191	183	209	246	272	264
	July	128	128	124	118	165	135	193	178	206
<i>Newton Stewart</i>	January	129	144	147	137	175	162	222	201	194
	July	69	101	112	89	113	115	140	140	171
<i>Stranraer</i>	January	344	401	405	397	366	384	404	420	433
	July	263	294	297	261	239	237	269	307	367
<i>Girvan</i>	January	120	135	234	176	183	147	220	272	248
	July	67	108	138	130	118	141	182	227	197
<i>Sanquhar</i>	January	48	74	139	123	133	126	127	144	376
	July	37	70	92	127	118	106	115	133	320
South-West	January	1,557	1,766	2,287	1,953	1,902	1,952	2,334	2,461	2,583
	July	1,035	1,393	1,488	1,387	1,403	1,364	2,015	1,925	2,312
	January	54,988	57,122	82,929	71,307	54,884	48,867	63,197	71,114	68,506
Scotland Total	July	40,688	52,947	67,302	52,193	41,881	39,632	58,808	61,789	63,361

Cross-Border Travel to Work

1 No published information is available on travel to work across the border but, at the request of the Study team, the Census Office have prepared special tabulations on movement to and from local authorities in the South-West Planning Region and the Northern Region. The information is from the 1966 10 per cent sample census and is liable to sampling error, particularly in the case of the smaller flows. For convenience all census figures have been multiplied by 10.

2 1,150 persons travel from the South-West to work in the Carlisle area while 130 persons employed in the South-West live south of the border.

Travel to Work to England (See Table 1)

3 Movement from Gretna D.C. is by far the largest component of the flow to the Carlisle area with almost two-thirds of all the workers originating here. The census indicates that 300 persons travel to Carlisle Burgh while 380 travel into the Border Rural District. The total flow of 680 represents 28 per cent of Gretna D.C.'s residents in employment and this is the only local authority where movement over the border is of major significance.

4 The only other region in the South-West where employment in the Carlisle area is the main alternative to local employment is the Langholm area from which 110 persons travel daily. This flow represents 5 per cent of the residents in employment, a much lower proportion than that found in Gretna D.C.

5 Travel to work in the Carlisle area is also an important aspect of movement from Annan Burgh and D.C. with 270 persons (5.8%) travelling over

the border for employment. In this case, however, the Carlisle area is secondary to the Dumfries area (c350) as a source of employment.

6 The 70 persons travelling from Dumfries and the 10 from Dumfries D.C. represent an extremely small proportion of the labour force in these areas.

7 Three-fifths of the persons crossing the border work in the Border Rural District while all but 10 of the remainder travel to Carlisle Burgh. The Census Office are currently preparing tables on the occupation and industry of persons travelling to England.

Travel to Work into the South-West (See Table 2)

8 Of the 130 persons travelling north, 80 live in Carlisle Burgh while 50 live in the Border Rural District. Annan Burgh attracts over one-third (50) of the total movement north while the remainder are scattered between the local authorities near the border. (See Map 8.)

Age/Sex Structure: Movement to England

9 83 (72%) of the 115 workers travelling to the Carlisle area are men, just over half of whom are over 45, a proportion substantially higher than the proportion of economically active males in Dumfries County who are over 45. Women travelling south on the other hand have a considerably younger age structure than the female residents in employment in Dumfries County (46% under 25 compared with 29% in the County). The further analysis of the census data on occupation and industry should allow some insight into the contrast between the age structure of the male and female flows.

TABLE 1

Movement to the Carlisle Area

South-West Local Authority	To Carlisle	To Border D.C.	All Movement		Total	% of Residents in employment
			Male	Female		
Dumfries L.B.	1	5	*6	1	7	†
Annan S.B.	2	6	6	2	8	3.5
Annan D.C.	8	11	13	6	19	8.0
Langholm S.B.	2	5	6	1	7	5.0
Langholm D.C.	3	2	4	1	5	5.0
Dumfries D.C.	1	0	1	0	1	†
Gretna D.C.	30	38	46	22	68	28.0
	47	67	82	33	115	

(figures 10% sample)

* 1 person travels from Dumfries to Whitehaven.

† Less than 1%.

TABLE 2

Movement from the Carlisle Area

South-West Local Authority	From Carlisle	From Border D.C.	Total movement		
			M.	F.	T.
Dumfries L.B.	2	—	2	—	2
Annan S.B.	1	2	2	1	3
Annan D.C.	4	1	5	—	5
Gretna D.C.	1	1	1	1	2
Lochmaben D.C.	—	1	1	—	1
Total	8	5	11	2	13

(figures 10% sample)

TABLE 3

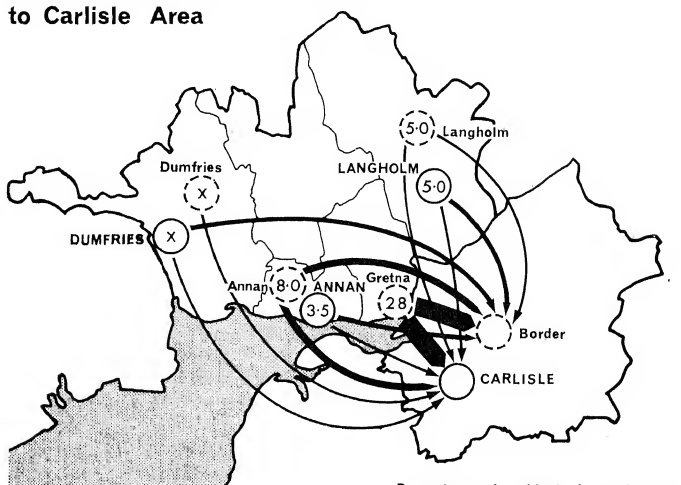
Age/Sex Structure of Workers Travelling to the Carlisle Area

	% Workers moving South			% Economically active in Dumfries County		
	Males	Females	Total	Males	Females	Total
15/24	18	46	26	20	29	23
25/44	31	27	30	41	37	39
45 +	51	27	44	39	34	38

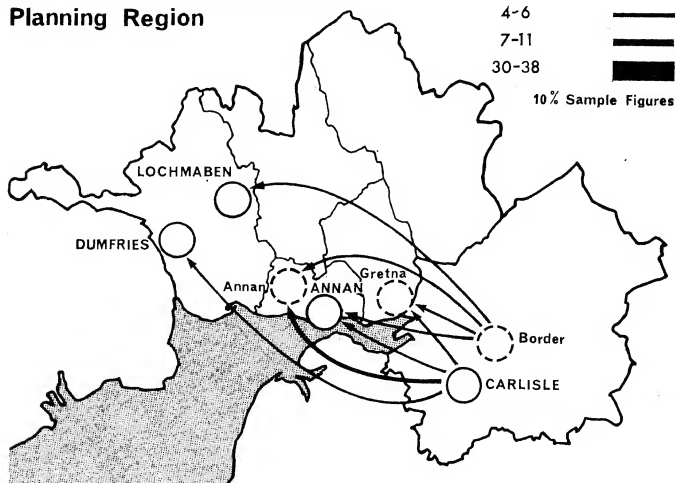
Source 1966 Census (10% Sample)
Unpublished data

CROSS BORDER TRAVEL TO WORK

South West Planning Region to Carlisle Area



Carlisle Area to South West Planning Region



Machars Survey

1 In order to gain some insight into the special problems of the rural areas, the South-West Consultative Group suggested that a small field survey might be carried out in the Southern Machars south of Wigtown. They felt that the major rural problems of declining employment opportunities, high unemployment and heavy emigration were particularly severe in the Machars and that a survey would both throw light on the general problem of rural areas and offer some assistance in the solution of the particular problems of the area. A ten per cent household survey covering 136 households was made in May 1969.

2 The results of the survey showed that there was a general concern about the lack of employment opportunities in the area, especially for young people and for school leavers. For example:

- (i) No households with children considered job opportunities for young people to be good and 88 per cent considered them to be poor.
- (ii) 78 per cent of the chief wage earners considered that if they lost their present job the prospects of alternative employment were few.
- (iii) Although most people (92 per cent of all households) wished to remain in the area, employment was given as the main reason why a number of families felt they might have to leave.
- (iv) Of members of households who left the area in the last 10 years, 93 per cent left for employment reasons.

3 Both men and women would like to see more opportunity to work in a factory—indeed additional employment opportunity was usually identified as factory employment. Thirty-five per cent of the chief wage earners were actively interested in taking a factory job although most of them were already in employment.

4 Although both men and women expressed preference for local employment, *eg* at Whithorn, the men were prepared to travel as far as Newton Stewart and Wigtown. In more general terms they were prepared to make a journey to work of up to an hour rather than leave the area and accepted this would probably be necessary. Only a small proportion were prepared to travel as far as Stranraer. Women emphasised the necessity for local employment and were not prepared to travel as far as men.

5 Summing up, the survey indicates that there is a relationship between employment opportunity and migration and that the introduction of manufacturing industry would have the effect of holding a number of families, especially those with children, who otherwise might leave the area, and further reduce the already dwindling labour resources. The people in the Southern Machars themselves see the three centres of Newton Stewart, Wigtown and Whithorn as reasonable locations for new employment, but since Newton Stewart–Minnigaff has been identified as the centre with the best prospects of attracting new industry it can be assumed that men would accept the choice of Newton Stewart as a regional holding point. The views of the women uphold the case for introducing more local employment, *eg*, at Whithorn.

Financial Aids Available for Industrial Development

1 Ministry of Technology Incentives (including Derelict Land)

Statutory provisions for assistance to industrialists are the Industrial Development Act 1966 and the Local Employment Acts 1960–66. The benefits apply to Development Areas, *ie*, the whole of Scotland with the exception of the Edinburgh area (excluding Leith Employment Exchange), and additional incentives apply to Special Development Areas, *ie* Girvan and Sanquhar Employment Exchange Areas in the South-West where the rundown of the coal-mining industry is expected to create high unemployment.¹

Since July, 1968 most service industries (Orders 19–24 of the Standard Industrial Classification) have been excluded from receiving assistance, with the exception of projects bringing over 50 new jobs into a Development Area. The assistance available may be:

- (a) premises rented or sold on favourable terms;
- (b) grants of 25 per cent of the cost of new building, extension or adaption of existing buildings or in special circumstances, *eg* where the new premises are a considerable distance from the firm's headquarters, either a building grant of 35 per cent or a rent-free period of two years in a Mintech factory;
- (c) loans for an undertaking setting up or expanding in a Development Area;
- (d) special grants in respect of the initial expenses incurred by firms moving to a Development Area.

The additional incentives for *new* projects (November 1967) being brought into SDA's are as follows:

- (1) Five years rent-free period in Mintech factories;
- (2) building grants up to 35 per cent *and* low interest loans towards balance of costs, and
- (3) operational grants for three years (10 per cent per year) on cumulative expenditure.

There is also provision for the payment of Investment Grants under the Industrial Development Act 1966 for certain qualifying industrial processes and assets within development areas. The rate of grant is 40% for machinery or plant, certain computers and mining works as compared with the 20% national rate.

¹ The Local Employment Act 1970 made Intermediate Areas (*ie*, Leith area in Scotland) eligible for 25 per cent building grants, Government advance factories, industrial training grants and 75 per cent grants towards clearance of industrial blight.

Derelict Land

Grants to Local Authorities for approved schemes within Development Areas for the rehabilitation of derelict land are made under Section 20 of the Industrial Development Act, 1966. The Ministry of Technology must be satisfied that the scheme is expedient with a view to contributing to the development of industry in the area.

The Secretary of State also has powers under Section 10 of the Local Government (Scotland) Act, 1966 to pay grants either inside or outside Development Areas without reference to the Ministry of Technology.

In the former case the specific grant is at the rate of 85% of the approved net cost irrespective of the amount of the Resources Element of Rate Support Grant provided the aggregate of both grants does not exceed 95%. The payment is on a capital basis.

In the latter case the rate of grant must not exceed 50% of the approved net cost and is normally payable on a revenue basis.

2 Other Government Aid

(a) Regional Employment Premium

Employers with manufacturing establishments in the Development Areas are eligible for Regional Payments by the Department of Employment and Productivity under the Selective Employment Payments Act.

(b) Hotels

- (i) The South-West forms one of the rural parts of Development Areas in which small hotels, guest houses, etc. are eligible for loans from the Development Commission through the Small Industries Council for Rural Areas of Scotland (S.I.C.R.A.S.) in respect of new or improved accommodation, equipment or working capital.
- (ii) The higher rate of grant under the Scottish Tourist Board's Hotel Development Incentive Scheme is also payable for new hotels, extensions and improvements.
- (iii) Hotels in these areas are eligible for a full refund of Selective Employment Tax.

(c) Housing

Following the White Paper 'The Scottish Economy 1965–1970' the house building programme of the Scottish Special Housing Association is directed mainly towards building:

- (1) in areas where there is a general expectation or intention of industrial expansion, in advance of or in response to specific demands from particular firms or industries; and
- (2) in areas where there is a substantial expansion of employment and the consequential demand for housing is larger than can reasonably be met by the local authority—to meet the specific needs of the additional population.

Under Section 8(c) of the Housing (Financial Provisions) (Scotland) Act 1968 an additional subsidy of up to £14 per house for a period not exceeding 10 years may be payable to local authorities for the provision of houses for incoming industrial workers if the houses could not be provided by a local authority without unreasonably increasing the rate burden or the rents for other houses provided by the authority.

(d) *Training*

The Department of Employment and Productivity provides financial assistance under the Employment and Training Act, 1948 towards the cost of training additional labour required by firms moving into, or expanding within, a Development Area. Appendix 8 gives further details.

(e) *Local Authorities*

Local planning authorities have power to erect buildings for industrial purposes under section 19 of the Town and Country Planning (Scotland) Act, 1945 (reprinted in the Eleventh Schedule to the Town and Country Planning (Scotland) Act, 1947). Under these powers a local planning authority may, with the consent of the Secretary of State, erect, construct or carry out any building or work (*eg* site servicing) on land which they have acquired. The same powers are available to a local authority which is not a planning authority in respect of land comprised in an approved Town Development Scheme.

In addition other local authorities have similar powers, again the consent of the Secretary of State, under Section 1 of the Local Government (Development and Finance) (Scotland) Act, 1964. Local authorities have discretionary powers, under Section 7 of the Local Government (Development and Finance) (Scotland) Act, 1964, to advance money for the purpose of enabling a person to whom they have disposed of land to erect buildings on that land. Authorities will normally require to obtain borrowing consent from the Secretary of State in such cases.

3 Development Commission Incentives

Assistance is available from the Development Fund (established by the Development and Road Improvement Funds Acts 1909 and 1910) for schemes which are considered to be beneficial to the rural economy of Great Britain and which are not eligible for assistance under any other statutory provision.

The scope of the Fund may be summarised as follows:

Financial assistance for:

- (a) the maintenance of nation-wide service of advice, intelligence, instruction and limited credit for small manufacturing and servicing industries in rural areas; particularly those whose work is of direct importance to productivity and exports but not excluding businesses in other categories which contribute to the welfare of the rural economy in general;
- (b) a limited scheme of loans for assistance to tourism enterprises in the rural parts of Development Areas;
- (c) pioneering and experimental schemes bearing on the rural economy which need support up to the stage at which they should either be recognised as a firmly established activity to be assisted (if assistance from public funds is still required) by one of the Departments of State or be abandoned, *eg*, concerted schemes for rural areas where the prevention and reversal of depopulation calls for economic and social development;
- (d) the work of voluntary or self-governing non-statutory bodies promoting a cultural and socially improved life for the rural population;
- (e) work of interest to several Government Departments but not qualifying or considered appropriate for statutory assistance;
- (f) marketing and co-operative schemes to strengthen the economy of agricultural or fishing communities; and
- (g) surveys of rural conditions or small schemes of research bearing on the rural economy.

The Commissioners make recommendations about financial aid to the Treasury following consultation with the appropriate Government Department, and advances are made through a Government Department either by grant or loan or a combination of the two. In Scotland the work at (a) and (b) above is integrated through the Small Industries Council for Rural Areas of Scotland.

4 Transfer Grants and Allowances

Among the schemes of grants and allowances to workers accepting work away from home, the following are of direct benefit to employers setting up in Development Areas. These schemes are provided for under the Employment and Training Act 1948, Section 3(4) and (5), and the Local Employment Act 1960 (Section 6), which are administered by the Department of Employment and Productivity.

(a) *The Key Workers Scheme*

This is designed to help employed workers to transfer permanently or temporarily beyond daily travelling distance of their homes to key posts in establishments their employers are setting up or

extending in Development Areas, the object of which is to provide employment opportunities for the unemployed people in these areas.

(b) *The Nucleus Labour Force Scheme*

This is designed to help the transfer of unemployed workers from areas of high unemployment to train in the parent factories of firms preparing to set up new establishments in the workers' home area, so that when trained they can return to work in the new establishment.

The facilities available are:

- (1) Free fare to take up employment. (If a car is used, public transport rate of mileage allowance will be paid.)
- (2) Settling-in-grant (£5).
- (3) Lodgings allowance (£4 4s per week).
- (4) Continuing liability allowance (up to £4 4s per week).
- (5) Assisted fares for home visits. (Cost of 2nd class return rail fare less 12/6d).
- (6) Dependents' fares to new area by cheapest means of public transport. (If car is used,

public transport rate of mileage allowances will be paid.)

- (7) Household removal costs.
- (8) Incidental expenses grant (£40).
- (9) Legal expenses on sale and/or purchase of house. (Up to a maximum payment of £125 when either house sale or purchase is involved and £200 when both transactions are involved.)
- (10) Free fare for domestic emergencies.
- (11) Free fare to return home on termination of employment through no fault of the worker while in receipt of lodging allowance or for employment interview or to take up employment in the home area.

These facilities are available for a period of two years for permanent transfers under the Key Workers Scheme. For temporary transfers, the facilities are normally available for a period of up to twelve months under the Key Workers Scheme and six months under the Nucleus Labour Force Scheme. Workers with annual earnings of less than £2,000 can qualify for these allowances.

Industrial Training in the South-West of Scotland

1 The major part of industrial training has traditionally been carried out by employers in their own establishments but now in most industries they are assisted by Industrial Training Boards—national bodies set up under the 1964 Industrial Training Act who have a special responsibility to ensure an adequate supply of properly trained men and women at all levels, to improve the quality of training and to effect a fair distribution of training costs among firms.

2 There are now 28 boards in operation covering three-quarters of the British labour force, including nearly all the South-West's major industries. (See Annex A.) The Agriculture and Forestry, Construction and Road Transport Boards have officers based in the South-West and 14 others have Scottish organisations.

ANNEX A

Industrial Training Boards

Industry Training Board	Operative Date	Approximate No. employed
Agricultural, Horticultural and Forestry	15. 8.66	500,000
Air Transport and Travel	8. 3.67	67,000
Carpet	18. 3.66	44,000
Ceramics, Glass and Mineral Products	23. 7.65	415,000
Chemical and Allied Products	9.10.67	500,000
Clothing and Allied Products	9.10.69	430,000
Construction	21. 7.64	1,700,000
Cotton and Allied Textiles	20. 7.66	200,000
Distributive	25. 7.68	2,250,000
Electricity Supply	24. 6.65	250,000
Engineering	23. 7.64	3,600,000
Food, Drink and Tobacco	25. 7.68	1,400,000
Footwear, Leather and Fur Skin	27.11.68	180,000
Furniture and Timber	9.12.65	215,000
Gas	24. 6.65	120,000
Hairdressing and Allied Services	10.12.69	100,000
Hotel and Catering	7.11.66	1,000,000
Iron and Steel	3. 7.64	327,000
Knitting; Lace and Net	18. 3.66	160,000
Man-made Fibres Producing	23. 2.66	50,000
Paper and Paper Products	29. 5.68	250,000
Petroleum	18. 5.67	84,000
Printing and Publishing	29. 5.68	400,000
Road Transport	15. 9.66	900,000
Rubber and Plastics Processing	9. 8.67	250,000
Shipbuilding	19.11.64	136,000
Water Supply	24. 6.65	44,000
Wool, Jute and Flax	29. 6.64	400,000

3 The total amount of training currently being carried out by industry in the South-West is unknown although Census figures indicate a 60 per cent increase between 1961 and 1966 in the number of known apprentices living in the region—an increase twice the Scottish average rate. Training boards collect statistical information from their members but this is not available in regional form. Most boards are seeking ways of improving their knowledge of the quantities of training needed in their industries. Meantime they have directed attention to improving quality, *eg* by promoting systematic off-the-job training and towards equalising costs by means of levy-grant finance.

4 The predominance of small firms and the scattered nature of much of the South-West's labour force make for special difficulties in the implementation of training recommendations. The Agriculture Board faces these problems in an extreme form in all areas and has selected its training priorities accordingly.

- (1) Providing short on-farm courses for adult workers.
- (2) Training local workers in instructional skills.
- (3) Providing liaison between farmers and local further education authorities in the provision of courses for young entrants.

In the South-West in the first half of 1969 the Board ran 34 on-farm courses and trained 15 local instructors. It has also been instrumental in the establishment of farming extension classes in Wigtownshire and Kirkcudbrightshire from colleges in Kilmarnock and Dumfries.

5 Other boards, many of them embracing firms in a wide variety of sizes and types of area, also recognise the special needs of small firms and are giving strong encouragement to the development of group training schemes among members who are prepared to join forces in order to benefit, for example, from the services of a specialist training officer or from the sharing of training premises. In 5 years the number of group schemes in Scotland has grown from 2 to over 50, including about 20 in engineering and others in a variety of industries including hotels and catering, construction, knitwear, road haulage and garages.

6 In the South-West so far there is only one group scheme—an engineering group based on Dumfries, drawing 11 members from as far afield as Sanquhar and Carlisle. They share a training officer and the Scottish members use training facilities at Chapel-cross. The Road Transport Board has been examining the possibility of establishing training groups among

garage and road haulage interest in the South-West; so far there has not been sufficient local support for a garage scheme. The Construction and Hotel and Catering boards have also been canvassing South-West members' support for group training.

7 The establishment of training boards along industry lines has facilitated the selection of priorities to meet the special needs of different industries as well as having obvious organisational advantages. There are, however, difficulties in catering for occupations in which several boards have a major interest. National policy is that boards should apply training standards laid down by the board which has the principal interest while the Central Training Council—the body which advises on the operation of the Industrial Training Act—makes general recommendations in regard to the common field of clerical and management training. The quantity of training required remains the responsibility of individual boards.

8 In a Region like the South-West, closer co-operation between boards seems particularly desirable. Even in the Region's largest catchment area—around Dumfries and Annan—the total market for individual skills is small and the provision of training to meet labour needs might in some cases be more effectively tackled on a joint industry basis. There are one or two precedents for this in other parts of Scotland. In Inverness a group training scheme has been operated jointly since 1967 by members of the Engineering and Road Transport Boards. More recently a scheme has been established in Peterhead covering engineering, ship repairing and paper making firms. In the Highlands a Joint Committee of Industrial Training Boards has been set up to tackle the Region's training needs and a start has been made with jointly sponsored courses in welding. The Scottish Committee of the Central Training Council, which was instrumental in establishing the Joint Committee, is of course interested in the whole of Scotland and an investigation is currently in progress to see whether joint action is possible in the South-West by those boards whose industries are strongly represented in the region.

Government Training

9 While the responsibility for training at all levels lies with industrial training boards, the Government makes a limited direct contribution in the field of adult training and retraining. Scotland has 9 Government Training Centres—rising to 10 in the Spring of 1971—where workers can be trained quickly to undertake work broadly comparable with that done by men who served a traditional apprenticeship. The total annual training capacity is now over 2,000 per year in a range of 23 trades (most courses are of 6 months' duration).

10 There is no Government Training Centre within the South-West Region. Indeed all existing centres are in Scotland's central industrial belt; the tenth will be in Dundee. Considerations of cost, economic size of centres and the importance of providing a range of classes have reinforced the need to site

centres where the supply of trainable labour and demand for skills are greatest. Centres are not designed, however, solely to meet the needs of their local areas. Thirty per cent of those now in training come from beyond daily travelling distance and receive assistance in finding and meeting the costs of lodgings. The Centre most convenient for the South-West is Irvine, which opened in 1964 and offers 160 places in 10 training trades.

11 Twenty-two men from the South-West completed courses in the year up to 30 November 1969, more than double the rate of output of previous years. Trainees have come from all parts and most have gone to Irvine GTC. The majority of those completing training have taken work beyond daily travelling distance of their homes, often outside the South-West altogether.

12 If employment opportunities are limited in the home area, men who have taken training to improve their prospects will naturally seek a market for their new skills outwith the region; skills learnt at Government training centres must soon be exercised if trainees are to be successfully redeployed. These considerations underline the importance of relating the provision of training as closely as possible to the expansion of employment opportunities.

13 Although in general there are not enough jobs to go round in the South-West, employers can experience specific labour shortages, arising either from expansion or from difficulty in replacing turnover in skills for which there is only a small local supply. Government training centres can help overcome shortages. Firms are encouraged to select trainees at an early stage in their courses so that subsequent training can be biased towards particular production needs. A recent development gives additional flexibility in this field. Employers can now sponsor existing workers for training free of charge at centres in specially prepared courses geared to companies' own requirements.

Government Assistance to Firms Training for Expansion in Development Areas

14 Since February 1966, when the whole of the South-West of Scotland was designated a Development Area, all firms expanding within the Region have been eligible for financial assistance towards the in-plant training of new recruits. Weekly grants of £10 for men, £7 for women, £5 for boys and £4 for girls are payable for training periods ranging from 2 weeks to a maximum of one year. In addition, firms are eligible for grants towards training additional apprentices, either from Industrial Training Boards or, where no Board is in operation, from the Department of Employment and Productivity.

15 By January 1969 16 new or expanding firms in South-West Scotland Planning Region had applied for and accepted offers of financial assistance towards the cost of in-plant training. Assistance towards training male workers was sought chiefly by a few large companies in the Eastern catchment area. In the

Region as a whole only 6 firms wanted training assistance for more than 10 male recruits. Many men were to be trained as process workers but assistance was also offered for training to higher levels of skill, *eg* laboratory technicians, instrument mechanics and apprentices. For women over half the jobs for which training assistance was offered were in firms outside the Eastern catchment, in Stranraer, Girvan and Sanquhar. Most were to be trained for clothing production, the remainder on other production or packing work. In the Dumfries area, assistance was sought for a few clerical and technical female jobs.

Supervisory and Instructor Training

16 By January 1969, 22 firms in the South-West had used the Department's facilities for training employees in methods of instruction. Six firms sent 26 instructors to the Instructor Training College in Glasgow and 19 sent 160 supervisors on 'training within industry' courses.

17 A full list of the financial and direct training assistance available to firms in the South-West is given in Annex B.

ANNEX B

Government Grants for, or related to, training. This note is intended as a general guide only and is not authoritative

1 General Grants payable either through Industrial Training Boards or direct by the Department to firms not covered by Industrial Training Boards

Course or Training	Application to be sent to	Amount	Remarks
(a) (i) Introductory Courses for Training Officers. (Approved) by D.E.S. and D.E.P.	<i>Firms not covered by an I.T.B.</i> D.E.P. (T.B.2.). 169 Regent Street, London W1	50% of Tuition fees.	Scheme can continue during first three months of I.T.B's life.
(ii) Courses providing training in the training functions for T.O.s, Training Supervisors and Instructors.		25% of Board's expenses (50% in first 18 months) in providing or grant-aiding courses. 'Expenses' includes fees, travel and subsistence but not salaries.	
(b) Craft and Technician Training in Development Areas (Capital Grants for off-the-job training places or per capita grants for training of additional apprentices)	Relevant Industrial Training Board—the Board is responsible for approving places and confirming additional number of approved trainees on each base date (1st January)	Alternatives (1) <i>Capital Grant</i> 60% of the agreed standard cost of setting up an off-the-job training place or (2) <i>Per Capita Grant</i> Annual grant of £100 for each additional apprentice. (For the first year of the scheme a bonus of £50 per additional apprentice will be payable in July, 1968). Initially this scheme runs from 1st January 1968 to 1st January 1973.	Available only through Industrial Training Boards and only for firms in scope of an I.T.B.
(c) Off-the-job Training Provision of additional training places (Running Expenses Grant)	Relevant Industrial Training Board	25% of the current expenses (<i>ie</i> running costs, excluding trainee wages), of additional places for off-the-job training for a period of 5 years.	Available only through Industrial Training Boards. Not available to non-board firms.
(d) Training or re-training of adult operatives (Capital Grants for plant and machinery)—applicable to development area only	Relevant Industrial Training Board	In Development Areas 70% of the cost of installing new machinery and 50% of second-hand machinery.	Available only through I.T.Bs.

N.B. Ministry of Technology Investment Grants are not payable in addition to the grants described at items 1(b) and 1(d)

2 Grants payable by the Department of Employment and Productivity direct to firms moving into or expanding in Development Areas

Course or Training	Enquiries or Application to be made at	Amount	Remarks
(a) Training provided by employers to fill additional jobs	Local Employment Exchange	Weekly grant for training lasting two weeks or more up to 52 weeks <i>Men</i> 18 or over £10 Under 18 £5 <i>Women</i> 18 or over £7 Under 18 £4	Leaflet D.D.L.1 (Rev.) Available from the employment exchange.
(b) Training courses in management, supervisory and technical subjects	As above	50% of tuition fees of approved courses.	Leaflet D.D.L.1. (Rev.)
(c) Rental of temporary training accommodation.	As above	Half the cost of rent and rates and half cost of adaptations.	Leaflet D.D.L.1. (Rev.)

Direct assistance is also offered by the Department of Employment and Productivity in the form of training provided free at Government Training Centres, Instructor Training Colleges, Training within Industry Courses and Industrial Rehabilitation Units. Department instructors are available to assist in training in firm's own workshops. Application for these various forms of assistance should be made to the Local Employment Exchange.

3 Youth Employment Service—Training Allowances Scheme

This scheme provides financial help to young people who live in areas of poor employment opportunities and who cannot obtain suitable training or other progressive employment otherwise than beyond daily travelling distance of their homes. Assistance is given in the form of a weekly maintenance allowance based on the amount by which an applicant's approved expenses exceed his/her income. The expenses taken into account are board and lodgings, mid-day meals, laundry, and pocket money—up to certain allowable limits—plus daily fares between lodgings and work if lodgings are more than two miles away. Parents may be expected to make a contribution towards the allowance, the amount depending on their income. Application for assistance under this scheme should be made to the local Youth Employment Officer.

4 Grants and Allowances to Transferred Workers

Financial assistance in the form of free and assisted fares, settling-in grants, lodging allowances, etc. is available under certain circumstances under the Department of Employment and Productivity Resettlement Transfer Scheme (Leaflet EDL 123) to unemployed workers and those likely to be redundant within six months moving to jobs in other areas. Similar facilities are available to existing employees transferring permanently or temporarily to key posts in new or expanding establishments in Development Areas (Key Workers' Scheme—Leaflet EDL 124).

Under the Nucleus Labour Force Scheme (Leaflet EDL 124) assistance is given to firms setting up new factories in areas of high unemployment to recruit unemployed workers living in those areas for transfer temporarily to parent factory for training. Applications for grants and allowances under those schemes should be made to the Local Employment Exchange.

5 Investment Grants: Industrial Development Act 1966

Investment Grants may be paid by the Ministry of Technology to firms engaged in the manufacturing, ship-repairing, extractive and construction industries in respect of capital expenditure incurred in providing new machinery or plant and ancillary equipment for use in their training bays or centres to train their own employees. It is a requirement for investment grant purposes that the machinery or plant does not attract benefit under the Department of Employment and Productivity financial arrangements which provide either for a 60% grant (70% in Development Areas) to employers installing new machinery or ancillary equipment for 'off-the-job schemes' of retraining for adult workers or for a 60% capital grant towards the cost of setting up additional 'off-the-job' training places for apprentices (see 1(b) and 1(d) above).

Investment Grants on machinery or plant used for training purposes will not be available to firms who utilise the equipment to train workers from other companies on a fee-paying basis.

Trunk and Principal Roads, Improvements, Expected Traffic Growth, Capacity and Sufficiency of System

1 Introduction

The routes of intercommunication, like the centres of population which they serve, have been determined largely by the physical restraints of the terrain, the dominant feature of which is the central highland area rising to over 2,500 ft. through which a series of parallel valleys run. The pattern of roads is further constrained by the deeply indented coastline varying in character from flat and alluvial to precipitous and rocky, skirting the Solway Firth and the southern approaches to the Firth of Clyde.

2 Accessibility

Dumfries is the focal point of several lines of communication and is the main service centre for the region. It is also well placed for access to the commercial centres not only of Scotland but of the Midlands and North-West England as well.

In contrast Stranraer has closer affiliations to Ayr, Kilmarnock and even Northern Ireland than to Dumfries. The remoteness tends to be accentuated when journey times as well as distances are considered and it is significant to note that Edinburgh and Glasgow and even Manchester (on completion of M6) could be reached from Gretna in less time than Stranraer.

3 General Description of the Trunk Roads

(1) **Trunk Road A74** The Glasgow–Carlisle trunk road A74, which skirts the eastern fringe of the region, is the most important road link between Scotland and England, carrying more traffic than all the other routes crossing the border put together, a high proportion being commercial traffic. In recent years this road has undergone comprehensive reconstruction to a high standard of dual two-lane carriageways as befits its strategic importance in linking the industrial centres of Scotland and England. Only two sections of A74 amounting to some $6\frac{1}{2}$ miles now remain for completion, namely:

4-mile section between Kirkpatrick Fleming and Gretna costing about £1.7m. due for completion in spring 1970 and 2.42 mile by-pass of Gretna. This scheme is being planned to fit in with the Ministry of Transport's proposals and includes about $1\frac{1}{4}$ miles of dual carriageway in Cumberland. In addition it will embrace a dualling of approximately one mile of A75 on a new alignment by-passing Gretna connecting to A74 by a free flow junction. The estimated cost of the entire scheme, which it is proposed to carry through under one contract, administered by Dumfries County Council as trunk road agents, will be

about £3m. and it is hoped to begin by the autumn of 1970.

There has been a complementary programme of reconstruction of the M6/A6 route in England and as this progresses northwards for completion by 1972 the popularity of the west coast route can be expected to increase.

(2) **Trunk Road A75** The Gretna–Stranraer trunk road A75 runs the breadth of the counties of Dumfries, Kirkcudbright and Wigtown. It joins the A74 at Gretna and accounts for more than one-third of the traffic crossing the border at this point. The road extends westwards through Annan, Dumfries, Castle Douglas and Newton Stewart with traffic intensities falling off progressively after Dumfries, and by the time the terminal at Stranraer is reached the volume is reduced by more than half.

For the purposes of description the route may be considered in sections as follows:

Gretna–Annan This section is of good alignment and has a 34 ft. wide single carriageway. The village of Gretna will be by-passed by the new A75 length of dual 24 ft. wide carriageways being constructed as part of the A75/A74 junction on the A74 Gretna diversion already referred to. In 1965 the volume of traffic was approximately 7766 P.C.U.s.¹ per day.

Annan–Dumfries This section is of good alignment with a 24 ft. wide single carriageway. It is fairly heavily trafficked, in 1965 the volume of traffic was approximately 8695 P.C.U.s. per day.

Dumfries–Castle Douglas The average carriageway width of this section is 22 ft.; its alignment is winding with no long lengths of straight. It is moderately trafficked, the 1965 volume of traffic was approximately 4256 P.C.U.s. per day.

Castle Douglas–Newton Stewart This section has a 20 ft. wide carriageway on a generally fair to poor alignment. Traffic is relatively light, the 1965 volume being approximately 3011 P.C.U.s. per day.

Newton Stewart–Stranraer The average carriageway width on this section is 21 ft. on a fair alignment. Traffic volumes are light, the 1965 volume figure being approximately 2763 P.C.U.s. per day.

¹ The conversion of actual numbers of mixed vehicles into equivalent Passenger Car Units (P.C.U.s.) gives a basis by which traffic flows of differing compositions can be assessed and compared. The figures quoted are for the month of August and in the South-West represent approximately twice the average traffic flow.

Having regard to the competing demands for funds from areas with more urgent traffic problems there is no programme of comprehensive reconstruction of the A75 envisaged. The section east of Dumfries is already generally of good alignment and width. The ultimate intention is to dual this length including by-passes of Annan and Gretna the latter, as stated, being included in the A74 Gretna Diversion. Elsewhere it is the intention to improve the general standard by successive small schemes to remove bottlenecks and danger-points, for example where the vertical and horizontal alignments are poor or where existing bridges restrict the movement of heavy loads. Two schemes recently completed are:

- (i) improvement at Newton, West of Gatehouse-of-Fleet costing £37,000, and
- (ii) realignment at Balannan costing £47,000.

Other improvement schemes which are under consideration are:

	<i>Estimated Cost £</i>	
(i) Ravenshall-Kirkdale Bridge Diversion	178,000	} Already in pro- gramme
(ii) Twynholm Bypass (Stage 1)	92,000	
(iii) Ramhill Bridge and Diversion of A710	200,000	
(iv) Minto Cottage Diversion	80,000	
(v) Threave Bridge and Diversion	200,000	
(vi) Glenluce Viaduct Diversion	100,000	
Total	£850,000	

Note: The Ravenshall-Kirkdale scheme has now started and Twynholm and Ramhill schemes are being prepared to start within the next 12-18 months. The possibility of widening Cree Bridge or making other provision to accommodate pedestrians is also under consideration.

Should it be decided that the now disused Dumfries-Stranraer railway line be disposed of other improvements of the A75 at the site of rail-over-road bridges would become possible and would facilitate the transport of S.S.E.B. transformers.

(3) **Trunk Road A76** The Dumfries-Kilmarnock trunk road A76 follows, in company with the Carlisle-Kilmarnock-Glasgow railway line, the valley of the River Nith. The route passes through Thornhill, Sanquhar and Cumnock, has an average width of about 22 ft. and an alignment varying from fair to poor. It is not heavily loaded, the 1965 traffic volume being approximately 4,540 P.C.U.s. per day.

Like the A75 this road will be progressively improved by selective treatment of substandard sections as and when funds are available. Four such schemes are at present under construction, namely:

- (i) Rottenyard-Mid Lowes north-west of New Cumnock costing £150,000
(This scheme is part of special measures to assist areas affected by colliery closures.)
- (ii) Improvement at Portrack costing 72,000
- (iii) Crossroads to Bargower costing 23,500
- (iv) Menock Bridge and approaches 60,000

Other schemes to follow in due course are:

(i) Little Heateth	25,000
(ii) Meadow to East Boreland	60,000
(iii) Reconstruction of Afton Bridge	30,000
(iv) Reconstruction of Elock Bridge	11,700
(v) Improvement at Enterkinfoot	8,500
	£440,700

By-passes of Carronbridge, Sanquhar and Kirkconnel, New Cumnock, Auchinleck and Cumnock are also planned. Both individually and collectively these amount to very substantial diversions and inevitably must be considered long term proposals. It is possible that in the present and foreseeable context the agreed diversion alignments may be unrealistic, inhibiting worthwhile local improvement and regard is had to this.

(4) **Trunk Road A77** The Glasgow-Stranraer trunk road A77 follows closely the Ayrshire coastline. As would be expected the traffic is heaviest in the Ayr-Kilmarnock-Glasgow section and diminishes with distance south of Ayr. A bypass of Kilmarnock should be constructed by the end of 1972. Ayr and Kilmarnock are strictly outside the study area but the route may, nevertheless, be conveniently considered as follows:

Ayr-Girvan This is the most heavily trafficked section of A77 south of Ayr. The carriageway has an average width of 22 ft with a generally poor alignment. The 1965 traffic volume was about 5,665 P.C.U.s. per day.

Improvement schemes recently begun on this section of road and which will improve its capacity considerably are:

	£
(i) Replacement of Monkwood Bridge and diversion	227,000
(ii) Completion of Ayr By-pass	490,000*
(iii) South of Maybole to Crossraguel	170,000*
(iv) South of Kewston	104,000*
(v) At Minishant	50,000*
(vi) Nether Culzean	49,000*
(vii) Damhouse	47,000*
(viii) Myremill-Maybole Burgh Boundary	35,000
(ix) South of Smithston Railway bridge	30,000
	£1,202,000

* These schemes are part of special measures to assist areas affected by colliery closure.

Girvan-Stranraer The average carriageway width of this section is 20 ft. but some sections are narrow and tortuous and may cause difficulties for larger vehicles. Generally, however, the traffic intensities are light, the 1965 traffic volume being approximately 2404 P.C.U.s. per day. An improvement scheme was completed north of Ballantrae during the winter of 1968/69 with the aid of the special funds allocated to assist areas worst hit by unemployment. Further small schemes, north and south of Girvan are in preparation together with

minor improvements in Wigtownshire at Innermessan and immediately south of the Ayr county boundary.

(5) **Trunk Road A701** This road extends from Dumfries to South of Moffat and provides connection to A74 and access thereby to and from the north. North and east of the A74 the route continues through Moffat to Edinburgh as a principal road. The carriageway is 22 ft. wide on average and except for tortuous alignment in the vicinity of the Ae, St. Annes and Jericho Bridges the alignment is fairly good. The 1965 traffic volume was approximately 2,296 P.C.U.s. per day and not unduly heavy for this kind of road.

As and when funds are available improvements will be carried out to these bridges having regard to both their weight carrying capacity and alignment.

(6) **Trunk Road A7** This road extends from north of Carlisle to Edinburgh passing through Langholm, Hawick, Selkirk and Galashiels. In the vicinity of Langholm the average width is about 20 ft. and the alignment varies from good to very poor and may be described generally as fair. Langholm itself presents some restriction to traffic owing to narrow streets. Traffic volume is, however, light and in 1965 was approximately 2087 P.C.U.s. per day.

In recent years the standard of the road has been steadily improved by several small schemes and this process will continue. Special traffic counts are being taken to assess likely increases in traffic in the light of the closure of the Edinburgh/Carlisle railway line and the M6/A74 route nearing completion.

4. General Description of Principal Roads

(1) **Dalry-Crawford section of A702** This may best be considered in two parts as follows:

Dalry-Thornhill This length has a carriageway width of about 21 ft. poorly aligned with many bends in parts. It is lightly trafficked, the estimated 1965 traffic volume being 502 P.C.U.s. per day.

Thornhill-Crawford This has a fair alignment with winding sections; its carriageway width is about 20 ft. The estimated 1965 traffic volume was 593 P.C.U.s. per day.

(2) **Dumfries-Lockerbie section of A709** This road has an average carriageway width of 22 ft., is lightly trafficked and has fair alignment. The estimated 1965 traffic volume was approximately 2651 P.C.U.s. per day.

(3) **Lockerbie-Langholm section of A709** (non-principal) This road has an average carriage width of 20 ft. and is of poor alignment. The estimated 1965 traffic volume was approximately 406 P.C.U.s. per day.

(4) **Newton Stewart-Dalry-Crocketford A712** The average width is 21 ft. with fair alignment. The daily traffic on this length is light, the estimated 1965 traffic volume being 602 P.C.U.s. per day.

(5) **Ayr-Castle Douglas A713** This route has a carriageway width of approximately 21 ft. with a

generally fair alignment but with several tortuous sections. It is not heavily trafficked, the estimated 1965 traffic volume being 1,778 P.C.U.s. per day.

(6) **Girvan-Newton Stewart-Port William A714** This road is generally 21 ft. wide with a fairish overall alignment but with some winding sections. It is lightly trafficked, the estimated 1965 traffic volume being 1,243 P.C.U.s. per day.

These roads are typical of the principal road system within the South-West. The volume of traffic carried is light and would not justify the high expenditure which a systematic improvement would require. The responsible County Councils, however, carry out improvements (with grant aid) as and when the funds are available.

5. Expected Traffic Growth

General censuses of traffic were taken, on trunk roads, in the years 1954, 1961 and 1965 and on class 1 (now principal) roads in 1954 and 1963. In addition a sample census of all classes of roads is now taken monthly at selected points. This information has been used to compute average August 1965 traffic volumes in P.C.U.s. on each of the important roads in the region. These are given in column (4) of Table A. Generally the level of traffic in the region at other times of the year is about 50% lower than prevails during the tourist season.

With the census information available it is possible to build up a picture of traffic growth which enables forecasts of future traffic intensities to be made. The average annual compound growth rates between the years 1954 and 1965 are shown in column (5) of Table A. Because the growth indicated at individual census points may reflect local peculiarities their projection into the future can sometimes be misleading. For this reason longer term forecasts are usually made on the basis of national trends which envisage a levelling off in later years. Such a curve is reproduced in Diagram 2. However, where it is expected that a particular road or region may experience trends significantly different from average, some modified curve may have to be devised. This has been done in the case of A75 in recognition of both current trends and future potential and the curve adopted is also shown on Diagram 2. In fact it is reasonable to assume that the whole region will experience a traffic growth rate rather higher than the national average as car ownership increases in the more populous areas to north and south and the established tourist venues become more congested. For the purposes of this study, therefore, the A75 curve shown on Diagram 2 has been applied to all roads examined with the exception of A74 to which the national average forecasts have been applied.

Appropriate multiplying factors for the years 1976 and 1986 have been derived from Diagram 2 and entered in columns (9) and (11) of Table A. Applying these factors to the 1965 traffic levels given in column (4), forecasts of the 1976 and 1986 traffic volumes can be made. These appear in columns (10) and (12) respectively on Table A.

TABLE A

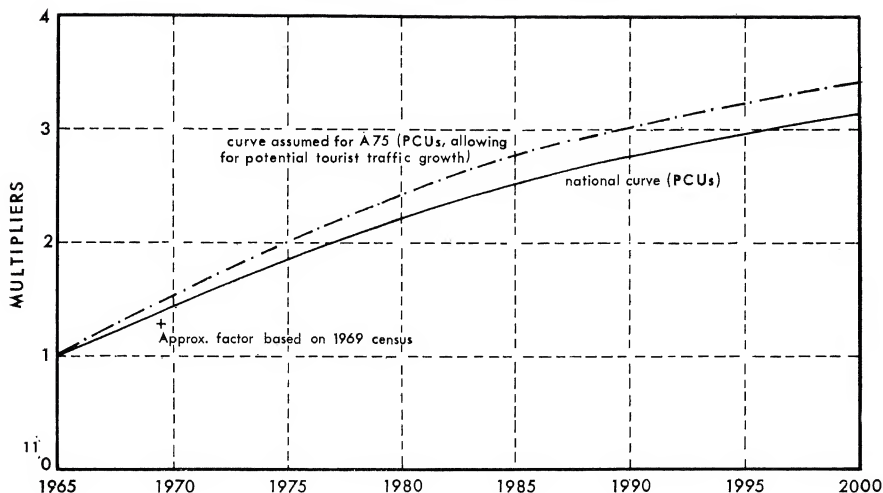
APPRAISAL OF TRUNK AND MAIN PRINCIPAL ROADS

In columns 13 and 14 minus values represent underload and high serviceability levels, plus values represent overload and correspondingly lower levels of serviceability but considerable overloads may be tolerated before free flow is seriously affected.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Road No.	Section	Approx. length miles	Average August 1965 P.C.U.s.	Average growth 1954-65 % compound	Average road width (feet)	Standard of alignment	* Assumed capacity	Assumed x factor for 1976	Estimated traffic C.U.s. 1976 (4) x (9)	Assumed x factor for 1986	Estimated traffic P.C.U.s. 1986 (4) x (11)	% age overload (10) - (8) x 100 (8)	% age overload 1986 (12) - (8) x 100 (8)	Remarks
A.74	Gretna-Beattock	28.75	14,255	8.0	2 x 24	very good	33,000	1.9	26,000	2.6	37,000	-21	+12	2.4 miles will remain to be completed after spring 1970.
TRUNK	A.75 Gretna-Annan	8.5	7,766	8.3	24	good	9,000	2.1	16,300	2.8	21,700	+81	+148	Dual carriageways are proposed for this section.
	Annan-Dumfries	16.0	7,695	8.6	24	good	9,000	2.1	16,150	2.8	21,500	+80	+139	
	Dumfries-Castle Douglas	18.5	4,256	6.8	22	fair	7,500	2.1	8,940	2.8	11,900	+19	+59	
	Castle Douglas-Newton Stewart	33.5	3,011	7.2	20	poor	6,500	2.1	6,320	2.8	8,430	- 3	+30	
	Newton Stewart-Stranraer	25.0	2,763	6.4	21	fair	7,000	2.1	5,800	2.8	7,750	-17	+10	
A.76	Dumfries-Kilmarnock	55.5	4,540	6.1	22	fair	7,500	2.1	9,500	2.8	12,700	+27	+70	
A.77	Stranraer-Girvan	30.0	2,404	3.7	20	poor	6,500	2.1	5,050	2.8	6,750	-22	+ 4	Schemes already in programme will greatly improve capacity.
	Girvan-Ayr	18.5	5,665	6.8	22	poor	7,000	2.1	11,900	2.8	15,850	+70	+127	
A.701	Dumfries-Beattock	17.25	2,296	6.3	22	fair	7,500	2.1	4,820	2.8	6,420	-36	-14	
A.7	Longtown-Langholm —Teviothead	25.0	2,087	6.0	20	fair	6,750	2.1	4,400	2.8	5,850	-35	-14	
PRINCIPAL	A.702 Dalry-Thornhill	21.25	502	2.5	21	poor	6,750	2.1	1,060	2.8	1,400	-84	-79	
	Thornhill-Crawford	16.25	593	4.4	20	fair	6,750	2.1	1,250	2.8	1,660	-91	-75	
	A.709 Dumfries-Lockerbie	12.5	2,651	5.0	22	fair	7,500	2.1	5,560	2.8	7,420	-26	- 1	
	Lockerbie-Langholm	18.0	406	4.5	20	poor	6,500	2.1	850	2.8	1,140	-87	-83	
	A.712 Newton Stewart-Crocketford	32.5	602	7.6	21	fair	7,000	2.1	1,260	2.8	1,690	-82	-76	
	A.713 Ayr-Castle Douglas	49.5	1,778	5.4	21	fair	7,000	2.1	3,730	2.8	4,960	-47	-29	
	A.714 Girvan-Port William	46.25	1,243	4.4	21	fair	7,000	2.1	2,610	2.8	3,480	-53	-50	

*Assumed capacities are derived from theoretical design capacities with suitable adjustment for any substandard feature

TRAFFIC GROWTH MULTIPLIERS



6. Capacity of Present Road System

For design purposes new roads are assigned theoretical traffic capacities according to their standard of construction, a 24 ft. wide carriageway of good alignment and limited obstruction having a design capacity of 9,000 P.C.U.s. per day. Similarly the capacity of existing roads can be assessed by adopting standard values suitably modified to take account of any substandard features.

For this study the roads have been roughly categorised according to their standard of alignment (column (7)) and taking account of their average width (column (6)) approximate theoretical capacities have been assigned to the various roads and are listed in column (8) of Table A.

It should be noted here that design capacities are in fact comfortable working capacities above which considerable overloading can be accommodated at the cost of some reduction in speed or free flow characteristics.

7. Sufficiency of Present Road System

By comparing the forecasted traffic volumes of columns (10) and (12) with the assumed capacities of column (8) an indication of the amount of overload to be expected in the years 1976 and 1986 can be obtained. These are quoted as percentages of over and underload in columns (13) and (14) of Table A.

It will be seen that except for the A75 between Dumfries and Gretna and the A77 between Girvan and Ayr only very nominal overloading will occur by 1976 and even by 1986, excepting again the sections of A75 and A77 already mentioned, overloading is still not expected to be a problem.

In fact these forecasts are made on the assessment of road capacities as they exist today but it is hoped that by timely removal of substandard features either already programmed or in mind for the future, capacities may be gradually improved and the onset of serious overloading deferred to near or beyond the year 2000. For the purposes of illustration a practical operating overload of 33⅓% on the theoretical capacities seen in column (8) have been set against the actual 1965 traffic intensities, shown in Map 5.

Sufficiency of the road system from the heavy load routing aspect is less satisfactory and the presence of many substandard strength bridges on trunk (excepting A74) and principal roads in the area imposes difficulties on the movement of loads in excess of 40 tons gross. This situation, so far as trunk roads are concerned, is likely to be remedied over the next decade.

8. Towns and Villages

As already mentioned the traffic volumes in the tourist season are generally about twice the normal volumes at other times of the year in the rural parts

of the region. Likewise the towns attract a substantial increase in traffic during the summer months and all experience some congestion as a result.

(1) **Dumfries** The market town of Dumfries is the focal point of a number of roads in the region and is by far the largest and busiest of the populated communities. As such it has acute traffic problems akin to other urban areas and has just undergone a Land Use/Traffic Study. This will evaluate several different road schemes including inner ring road and northern by-pass proposals.

(2) **Annan** Annan is situated on the A75 and the traffic has no alternative but to pass through the town. Because of the nuclear power station and other large scale development in the area the need for a by-pass will become more urgent. This by-pass is envisaged as part of the eventual dualling of the whole section of A75 between Dumfries and Gretna.

(3) **Gretna** Gretna is also situated on the A75 but will be by-passed in the course of A74/A75 Gretna Diversion work expected to start in 1970.

(4) **Castle Douglas** Consideration is currently being given to switching trunk road A75 designation and traffic from King Street (the main shopping street) to Queen Street.

(5) **Gatehouse-of-Fleet** The eventual intention is to divert the A75 some distance to the south of the small community, an undertaking of considerable size and cost which must, therefore, be regarded as a long term proposal.

(6) **Creetown** A western by-pass is here proposed.

(7) **Newton Stewart** Several roads converge in and around here and a certain amount of summer congestion occurs particularly at the narrow Cree Bridge. A working party has been set up to investigate the strength of the existing bridge and the adequacy of its foundation and to determine whether a widening and strengthening scheme would be practicable. In the longer term, a southern by-pass is proposed.

(8) **Stranraer** Stranraer too has its share of summer traffic problems accentuated at times by Irish ferry arrivals and departures although recent road improvements have helped in this respect. Stranraer, by its very nature, is not in need of a by-pass.

(9) **Ballantrae** A new Ballantrae Bridge and approaches has recently been constructed and no further diversions are here proposed.

(10) **Girvan** An eastern by-pass of Girvan is proposed.

(11) A number of by-passes are planned on the A76 including Carronbridge, Sanquhar and Kirkconnel, New Cumnock, Auchinleck and Cumnock. These are all substantial in nature and must be regarded as long term.

(12) **Langholm** The A7 passes through Langholm but no by-pass as such is planned for the town centre although the approaches are scheduled for some realignment with a new crossing of the River Esk.

Agriculture : Cropping, Stocking and Number of Holdings

District	Maybole			Girvan			Rhins			Machars and Creetown/Western			Kirkcudbright, Dalbeattie, Castle Douglas and Glenkens		
	June 1963	June 1968	Change 1963- 68 %	June 1963	June 1968	Change 1963- 68 %	June 1963	June 1968	Change 1963- 68 %	June 1963	June 1968	Change 1963- 68 %	June 1963	June 1968	Change 1963- 68 %
Crops	ac.	ac.		ac.	ac.		ac.	ac.		ac.	ac.		ac.	ac.	
Crops and grass	29,289	28,913	- 1.3	38,243	37,934½	- 0.8	75,272	74,590½	- 0.9	73,994	73,711½	- 0.4	118,885	118,815½	- 0.1
Tillage	5,514	5,282½	- 4.2	9,336	8,252	-11.6	19,997	16,201	-19.0	13,813	11,599½	-16.0	21,436	17,106	-20.2
Barley	983	2,487½	+153.1	1,478	2,954	+99.9	4,821	8,161½	+69.3	2,844	4,659½	+63.8	4,096	6,734	+64.4
Oats	2,718	1,261½	-53.6	3,128	1,368½	-56.3	7,855	3,108½	-60.4	6,705	3,406½	-49.2	10,631	5,520	-48.1
Potatoes	418	265½	-36.4	2,713	1,928½	-28.9	1,977	1,353½	-31.6	303	163½	-46.0	377	131½	-65.2
Turnips & Swedes	963	715	-25.8	1,105	752	-31.9	4,247	2,440½	-42.5	2,204	1,659½	-24.7	3,796	2,130½	-43.9
Livestock															
Dairy cows	5,856	5,397	- 7.8	5,565	4,952	-11.0	21,684	21,615	- 0.3	13,515	12,891	- 4.6	18,591	17,772	- 4.4
Beef cows	1,325	1,717	+29.6	3,197	6,035	+88.8	2,472	4,405	+78.2	6,276	9,627	+53.4	7,428	12,186	+64.1
Total cattle	19,227	19,414	+ 1.0	24,540	28,869	+17.6	50,372	56,016	+11.2	49,715	57,656	+16.0	71,699	81,711	+14.0
Ewes	29,540	26,850	- 9.1	62,711	61,222	- 2.4	29,739	29,888	+ 0.5	59,760	60,809	+ 1.8	123,733	116,343	- 6.0
Total sheep	69,494	63,547	- 8.6	143,890	141,742	- 1.5	69,137	68,861	- 0.4	146,350	148,377	+ 1.4	298,193	277,020	- 7.1
Total pigs	1,877	1,087	-42.1	1,451	556	-61.7	5,597	6,890	+23.1	7,174	9,734	+35.7	5,189	3,982	-23.3
Total poultry	49,486	30,825	-37.7	18,347	23,537	+28.3	117,022	120,563	+ 3.0	143,573	168,796	+17.6	121,093	135,779	+12.1
Holdings															
Total holdings	226	219	- 3.1	308	286	- 7.1	538	501	- 6.9	562	507	- 9.8	881	825	- 4.2
Full-time holdings	191	168	-12.0	253	232	- 8.3	429	398	- 7.2	407	375	- 7.9	621	577	- 7.1

APPENDIX 10—continued

District	Thornhill, Dumfries East, Moffat, Lockerbie, Annan and Greta			Langholm			Upper Nithsdale			Cumnock			South-West		
			Change 1963- 68 %			Change 1963- 68 %			Change 1963- 68 %			Change 1963- 68 %			Change 1963- 68 %
	June 1963	June 1968		June 1963	June 1968		June 1963	June 1968		June 1963	June 1968		June 1963	June 1968	
Crops	ac.	ac.		ac.	ac.		ac.	ac.		ac.	ac.		ac.	ac.	
Crops and grass	224,501	223,965½	- 0.2	18,630	17,895½	- 3.9	8,985	9,005½	+ 0.2	55,168	54,886½	- 0.5	642,967	639,719	- 0.5
Tillage	49,762	45,661½	- 8.2	3,206	2,727½	-14.9	1,335	867½	-35.0	7,959	5,688½	-28.5	132,358	113,385½	-14.3
Barley	13,542	21,834½	+61.2	570	916½	+60.7	160	197½	+23.3	727	1,989½	+173.6	29,221	49,933½	+70.9
Oats	21,206	12,188½	-42.5	1,702	1,171½	-31.2	729	350½	-51.9	5,252	2,549	-51.5	59,926	30,924½	-48.4
Potatoes	2,567	2,059½	-19.8	77	31½	-59.4	21	10½	-51.2	385	229½	-40.5	8,838	6,172	-30.2
Turnips & Swedes	7,682	4,739½	-38.3	589	410½	-30.3	202	172½	-14.6	771	556½	-27.8	21,559	13,577½	-37.0
Livestock															
Dairy cows	36,710	36,340	- 1.0	1,218	1,263	+ 3.7	1,397	1,235	-11.6	12,894	12,930	+ 0.3	117,430	114,395	- 2.6
Beef cows	9,779	15,930	+62.9	2,751	3,396	+23.4	1,074	1,526	+42.1	1,703	3,529	+107.2	36,005	58,351	+62.1
Total cattle	133,985	148,699	+11.0	10,865	11,977	+10.2	6,383	6,701	+ 5.0	37,012	39,809	+ 7.6	403,798	450,852	+11.7
Ewes	180,653	172,660	- 4.4	57,530	51,094	-11.2	26,967	27,808	+ 3.1	45,260	45,094	- 0.4	615,893	591,768	- 3.9
Total sheep	442,236	411,605	- 6.9	122,739	108,932	-11.2	60,008	62,205	+ 3.7	103,311	100,468	- 2.8	1,455,358	1,382,757	- 5.0
Total pigs	15,963	12,124	-24.0	472	146	-69.1	214	300	+40.2	2,337	2,000	-14.4	40,274	36,819	- 8.6
Total poultry	368,357	308,468	-16.3	38,374	17,677	-53.9	6,816	4,647	-31.8	72,617	53,407	-26.5	935,685	863,699	- 7.7
Holdings															
Total holdings	2,082	1,961	- 5.8	231	216	- 6.5	79	70	-11.4	482	460	- 4.6	5,369	5,045	- 6.0
Full-time holdings	1,343	1,214	- 9.6	127	111	-12.6	55	49	-10.9	390	355	- 9.0	3,816	3,479	- 8.8

Agricultural Labour Force

District	Maybole			Girvan			Rhins			Machars and Creetown/Western			Kirkcudbright, Dalbeattie, Castle Douglas and Glenkens		
			Change			Change			Change			Change			Change
	June 1963	June 1968	1963-68 %	June 1963	June 1968	1963-68 %	June 1963	June 1968	1963-68 %	June 1963	June 1968	1963-68 %	June 1963	June 1968	1963-68 %
Numbers of Workers															
Full-time Workers:															
Males—															
65 years and over	22	8	- 63.6	25	11	- 56.0	35	12	- 65.7	35	21	- 40.0	46	25	- 45.7
20-64 years	302	229	- 24.2	465	351	- 24.2	830	644	- 22.4	695	579	- 16.7	1,184	958	- 19.1
18-19 years	27	24	- 11.1	45	25	- 44.4	81	62	- 23.5	65	44	- 32.3	96	46	- 52.1
under 18 years	43	23	- 46.5	46	22	- 52.2	81	48	- 40.7	61	44	- 27.9	112	49	- 56.3
Total Males	394	284	- 27.9	581	409	- 29.6	1,027	766	- 25.4	856	688	- 19.6	1,438	1,078	- 25.0
Females	76	33	- 56.6	71	39	- 45.1	158	81	- 48.7	115	60	- 47.8	112	60	- 46.4
Total Full-time	470	317	- 32.6	652	448	- 31.3	1,185	847	- 28.5	971	748	- 23.0	1,550	1,138	- 26.6
Part-time Workers:															
Males	18	15	- 16.7	14	5	- 64.3	46	16	- 65.2	31	33	+ 6.5	58	54	- 6.9
Females	47	20	- 57.4	49	34	- 30.6	123	56	- 54.5	42	35	- 16.7	65	59	- 9.2
Total Part-time	65	35	- 46.2	63	39	- 38.1	169	72	- 57.4	73	68	- 6.8	123	113	- 8.1
Casual and Seasonal Workers:															
Males	37	19	- 48.6	43	12	- 72.1	82	43	- 47.6	71	56	- 21.1	73	59	- 19.2
Females	36	11	- 69.4	93	19	- 79.6	87	31	- 64.4	45	16	- 64.4	24	12	- 50.0
Total Casual and Seasonal	73	30	- 58.9	136	31	- 77.2	169	74	- 56.2	116	72	- 37.9	97	71	- 26.8
All Workers:															
Males	449	318	- 29.2	638	426	- 33.2	1,155	825	- 28.6	958	777	- 18.9	1,569	1,191	- 24.1
Females	159	64	- 59.7	213	92	- 56.8	368	168	- 54.3	202	111	- 45.1	201	131	- 34.8
Total Workers	608	382	- 37.2	851	518	- 39.1	1,523	993	- 34.8	1,160	888	- 23.4	1,770	1,322	- 25.3
Age Structure of Male Full-time Workers, June 1968	No.	%		No.	%		No.	%		No.	%		No.	%	
65 years and over	8	2.8		11	2.7		12	1.6		21	3.0		25	2.3	
45-64 years	92	32.4		126	30.8		219	28.6		189	27.5		364	33.8	
35-44 years	44	15.5		100	24.4		158	20.6		110	16.0		217	20.1	
25-34 years	54	19.0		76	18.6		158	20.6		191	27.8		241	22.4	
20-24 years	39	13.7		49	12.0		109	14.2		89	12.9		136	12.6	
15-19 years	24	8.5		25	6.1		62	8.1		44	6.4		46	4.3	
under 18 years	23	8.1		22	5.4		48	6.3		44	6.4		49	4.5	
	284	100.0		409	100.0		766	100.0		688	100.0		1,078	100.0	

APPENDIX 11—continued

District	Thornhill, Dumfries Thornhill, Dumfries East, Moffat, Lockerbie, Annan and Gretna			Langholm			Upper Nithsdale			Cumnock			South-West		
	Change 1963—			Change 1963—			Change 1963—			Change 1963—			Change 1963—		
	June 1963	June 1968	68 %	June 1963	June 1968	68 %	June 1963	June 1968	68 %	June 1963	June 1968	68 %	June 1963	June 1968	68 %
Numbers of Workers															
Full-time Workers:															
Males—															
65 years and over	89	47	- 47.2	5	2	- 60.0	5	3	- 40.0	12	6	- 50.0	274	135	- 50.7
20-64 years	2,195	1,684	- 23.3	213	162	- 23.9	109	89	- 18.3	418	308	- 26.3	6,411	5,004	- 21.9
18-19 years	190	107	- 43.7	17	8	- 62.9	7	8	+ 14.3	66	46	- 30.3	594	370	- 37.7
under 18 years	239	114	- 52.3	11	12	+ 9.1	16	9	- 43.7	73	61	- 16.4	682	382	- 44.0
Total Males	2,713	1,952	- 28.1	246	184	- 25.2	137	109	- 20.4	569	421	- 26.0	7,961	5,891	- 26.0
Females	236	135	- 42.8	10	9	- 10.0	8	8	-	130	78	- 40.0	916	503	- 45.1
Total Full-time	2,949	2,087	- 29.2	256	193	- 24.6	145	117	- 19.3	699	499	- 28.6	8,877	6,394	- 28.0
Part-time Workers:															
Males															
65 years and over	97	92	- 5.2	12	7	- 41.7	3	5	+ 66.7	16	19	+ 18.7	295	248	- 16.6
20-64 years	186	109	- 41.4	11	11	-	13	5	- 61.5	82	45	- 45.1	618	374	- 39.5
Total Part-time	283	201	- 29.0	23	18	- 21.7	16	10	- 37.5	98	64	- 34.7	913	620	- 32.1
Casual and Seasonal Workers:															
Males															
65 years and over	160	124	- 22.5	13	10	- 23.1	4	4	-	64	46	- 28.1	547	373	- 31.8
20-64 years	45	40	- 11.1	1	-	-100.1	2	1	- 50.0	17	9	- 47.1	350	139	- 60.3
Total Casual and Seasonal	205	164	- 20.0	14	10	- 28.6	6	5	- 16.7	81	55	- 32.1	897	512	- 42.9
All Workers:															
Males															
65 years and over	2,970	2,168	- 27.0	271	201	- 25.8	144	118	- 18.1	649	486	- 25.1	8,803	6,510	- 26.0
20-64 years	467	284	- 39.2	22	20	- 9.1	23	14	- 39.1	229	132	- 42.4	1,884	1,016	- 46.1
Total Workers	3,437	2,452	- 28.7	293	221	- 24.6	167	132	- 21.0	878	618	- 29.6	10,687	7,526	- 29.6
Age Structure of Male Full-time Workers, June 1968															
65 years and over	No.	%		No.	%		No.	%		No.	%		No.	%	
45-64 years	47	2.4		2	1.1		3	2.8		6	1.4		135	2.3	
35-44 years	638	32.7		69	37.5		42	38.5		87	20.7		1,828	31.0	
25-34 years	457	23.4		41	22.3		14	12.8		81	19.2		1,222	20.7	
20-24 years	374	19.2		35	19.0		18	16.5		65	15.5		1,212	20.6	
18-19 years	215	11.0		17	9.2		15	13.8		75	17.8		744	12.6	
under 18 years	107	5.5		8	4.4		8	7.3		46	10.9		370	6.3	
	114	5.8		12	6.5		9	8.3		61	14.5		382	6.5	
	1,952	100.0		184	100.0		109	100.0		421	100.0		5,891	100.0	

Agricultural Advisory Services

1 Advice on Agriculture (including farm buildings and farm management), dairying, farm machinery, poultry husbandry, horticulture, bee-keeping and milk technology is available from the Advisory Service of the West of Scotland Agricultural College through trained personnel stationed at area and local offices and supported by the scientific resources of the College. The area and local offices are in Dumfries, Castle Douglas and Stranraer. The Stranraer office is backed by the Ayr office, which is itself outside the study area.

2 The work of the Advisory Service is most evident in the many cases throughout the South-West where, as a result of advice from the College, farmers have developed their farm buildings from the old 'farm steading' type into modern efficient units. There are, of course, many cases throughout the South-West of farmers having developed their farms as businesses and increased their profits as a result also of advice from the Advisory Service; and there is increasing pressure for more farm management advice.

3 It is proposed to start work next financial year on a new building in Dumfries to house replacement area offices and a new veterinary investigation sub-centre. For some time past, considerable pressure for the establishment of a veterinary investigation sub-centre has come both from the British Veterinary Association and local farmers.

4 The College is in process of moving to Auchincruive near Ayr from Glasgow, though it will be some years yet before the transition is complete. A substantial part is already established at Auchincruive, where it influences the agriculture of the South-West both through the Advisory Service and through the educational courses offered, particularly those in dairying. The College is, for instance, the only one in Britain offering a course leading to the Higher National Diploma in Food Technology (Dairy Technology).

5 The College also does experimental work in testing and developing findings of the agricultural research service. Agricultural Research is directed and co-ordinated throughout Great Britain by the Agricultural Research Council; and there are 10 research institutes in Scotland, of which 8 are financed by grants from D.A.F.S. There is close liaison between specialist officers in the College and the staffs of the research institutes. Particular mention should be made of the Hannah Dairy Research Institute, which is situated next to the College at Auchincruive. Both this juxtaposition and the fact that dairying is the main agricultural activity in the South-West have meant that the Hannah has been closely involved with farming in the South-West, especially in grassland work. The staff of this Institute have had many contacts with farmers, both as speakers at meetings and through visits to the Institute by farmers.

Agricultural Grants and Subsidies

1 Statistics under the various grant and subsidy schemes are available only by counties and in some cases by areas. Table A attached lists the subsidy schemes, indicates their purpose and gives payments in the three counties for the latest available year.

2 Trends in Subsidy Schemes in the Three Counties

(a) *Hill and Upland Sheep Scheme*

In Dumfries and Kirkcudbright, the movement in numbers of hill sheep attracting subsidy has followed the general Scottish trend rising to a peak in 1967 and declining marginally in 1968, while in Wigtown there has been a modest steady increase which has helped to stabilise the total number for the area as a whole. Only marginal variations from the five-year average for the area (about 316,000 ewes) are expected.

(b) *Hill Cattle Scheme*

The steady increase in numbers of cattle eligible, reflecting not only an increase in the size of established herds but a tendency among upland dairy farmers to move to beef production, shows no sign of declining.

(c) *Beef Cow Scheme*

The decrease in numbers eligible, particularly in Kirkcudbright, has to some extent been the result of the reclassification of a number of farms as eligible for Hill Cattle Subsidy.

(d) *Calf Subsidy Scheme*

The apparent decrease in 1967 from the peak reached in the previous year was to some extent the result of the standstill on certifications imposed by the foot-and-mouth outbreak. The trend may be expected to reflect the continuing rise in the beef cattle herd.

(e) *Winter Keep Scheme*

The option between acreage and headage supplementary payments was introduced in 1967, and the swing in favour of headage payments is expected to continue.

(f) *Ploughing Grants Scheme*

When the rate of subsidy per acre was reduced from £5 to £2 10s. under Part I of the 1966 Scheme, the number of applications from all Scottish counties fell by about 50%. From 1967, Part I ceased to operate.

(g) *Small Farmers' Schemes*

The Small Farm (Business Management) (Scotland) Scheme 1965 extended the limits of eligibility (both as to acreage and standard man-day requirements) and thus enabled a larger number of small farmers in the three counties to participate in the Scheme.

(h) *Lime Scheme*

The consumption of lime in the three counties has followed the pattern of consumption throughout Scotland. The sharp drop in lime usage in 1967 was probably caused by a number of factors, namely, economic conditions including the reduced profitability of hill and upland farming (particularly during 1966), adverse weather conditions for liming and possibly the progressive decrease in the rate of subsidy.

(i) *Fertilisers Scheme*

Consumption of fertilisers in the three counties has followed the pattern of consumption throughout Scotland, there having been a significant increase in the use of nitrogen since 1963 but only slight variations in the use of other nutrients.

3 Trends in Grant Schemes

The schemes concerned are Livestock Rearing Land Improvement Schemes, Farm Improvement Scheme, Hill Land Improvement Scheme and Farm Structure Schemes. These improvement grants, by encouraging the provision of modern labour-saving buildings and machinery, and the carrying out of land improvements (reclamation, shelter belts, fencing, etc.) which improve productivity and reduce labour requirements and costs, are likely to accelerate the run-down of the agricultural labour force.

(a) *Livestock Rearing Land Improvement Schemes*

Compared with the response to the Schemes over Scotland as a whole, the response in the South-West has been relatively high.

(b) *Farm Improvement Scheme*

For the 'new' Scheme which has operated since the Agriculture Act 1967, the estimated total cost of projects approved approaches much nearer the total cost involved in 'old scheme' approvals than in Scotland as a whole. This, no doubt, reflects the special usefulness of this new scheme, with its provision for grant on fixed plant and

machinery (bulk milk tanks, pipe-lines, etc.), to an area where dairying plays a relatively large part in the agricultural economy.

(c) *Hill Land Improvement Scheme*

The relative response has been even better than for the Livestock Rearing Land Improvement Schemes.

(d) *Farm Structure Schemes*

The comparatively low response to the Schemes probably reflects the fact that the size of farm business in the South-West is relatively satisfactory, 'full-time' farms amounting for all but an infinitesimal fraction of total output. On the other hand, it is early to judge the impact of this very recently introduced and very complicated scheme.

TABLE A
Subsidy Schemes¹

Scheme	Purpose	Amounts paid ²	
		£000	Year
Hill and Upland Sheep	To encourage development of sheep production in hills and uplands	387	1968
Hill Cattle	To encourage development of cattle production in hills and uplands	595	1967
Beef Cow	To encourage development of beef cattle production in areas other than hills and uplands	20	1967
Calf	To encourage development of beef cattle production	632	1967
Winter Keep	To encourage development of sheep and cattle production in hills and uplands	316	1967
Ploughing Grants	To encourage cropping of long-standing grassland	9	1967
Small Farmers	To encourage improvement of business efficiency of small farms	14	1968
Lime	To encourage spreading of lime	119	1967
Fertilisers	To encourage use of nitrogenous and phosphatic fertilisers	569	1967

Note 1—Excluding deficiency payment schemes.

Note 2—Figures relate to the three counties.

Social, Educational and Health Services

Social Services

1 The opportunity more fully to consider and take action on social welfare problems is now greatly strengthened by the Social Work (Scotland) Act 1968. The appointment of social work directors and social work committees combining all of the social welfare functions will give scope for a more comprehensive and co-ordinated view of the problems of the communities. It is hoped that these committees will be able to contribute and advise in the planning and management of new projects from the earliest stages so that, if change is to take place, a greater appreciation of the effects which changes are likely to have on incomers and on the existing communities can be made. Voluntary organisations also have valuable contributions to make and there may be scope for setting up a Council of Social Service for the South-West so that opinions can be co-ordinated, interchange of ideas facilitated and a focal point created.

Education

2 The four education authorities in the region are progressively reorganising secondary education on comprehensive lines. In the Eastern and Western Sectors no change is foreseen in the present location of non-denominational schools; but Ayrshire Education Authority's plans include the ultimate closure of the secondary department of the Sacred Heart High School, Girvan, and the transfer of the secondary pupils to Ayr. In the Central Sector the present small 4-year departments at Cargenbridge, Dalbeattie, Castle Douglas, Dalry and Gatehouse are to be kept under review with a view to reducing their number. The foreseeable pattern of secondary schools would be as follows:

Six-Year Comprehensive Schools

Girvan, Stranraer, Newton Stewart, Kirkcudbright, Dumfries, Annan, Lockerbie and Thornhill. At Dumfries the provision will consist of a two-tier comprehensive system comprising a senior high school and two junior schools.

Four-Year Partly Comprehensive Schools

Langholm, Moffat, Sanquhar and the revised number in the Central Sector. In general able pupils will be fed into the nearest six-year comprehensive school.

3 There are three further education colleges in the region: Dumfries Technical College, The Barony School Parkgate (Agriculture) and the Castle Douglas School of Commerce. In addition, eleven further education centres offer evening classes. Given the distribution of population in the region and the relatively small student population,

the education authorities of Wigtownshire, Kirkcudbright and Dumfriesshire have agreed that the Dumfries Technical College should be developed as the main centre of further education in the region and new buildings are to be erected at Heathhall Airfield. Students in the western part of Wigtownshire and in the Girvan district, it is also generally agreed, would be best catered for at the colleges in Ayr and Kilmarnock. Small local centres offering a limited range of courses would be set up where there was a justifiable demand.

Health Services

4 Further rationalisation and improvement of hospital services in the region is taking place on lines indicated by the Western Regional Hospital Board's plan for the region published in September 1966 and circulated for comment to the interested bodies in the area. The major acute services for the whole of the South-West region are centred on Dumfries. Cresswell Hospital is a modern unit providing specialist obstetric services for the whole region. Specialist acute services are provided at the Dumfries Royal Infirmary to be replaced by a new district general hospital, work on which is expected to start in 1970 for completion in about 1975. In the various sectors of the region there are a number of cottage hospitals providing general practitioner services in the main under consultant supervision from Dumfries.

5 In the eastern sector the pattern on the opening of a new district general hospital will be a concentration of hospital services in and around Dumfries together with continuance of the cottage hospitals at Langholm and Moffat. Discussions are at present taking place about the provision of a health centre in Dumfries.

6 In the central sector two cottage hospitals will continue—at Castle Douglas and Kirkcudbright. A health centre project has been approved at Kirkcudbright and planning is under way for one at Castle Douglas.

7 In the western sector the cottage hospital at Newton Stewart will continue and planning is under way for a health centre. In the Stranraer catchment area the out-dated Waverley House hospital for old people and Glenoch Maternity Hospital are to be rebuilt on the Glenoch site. The Garrick Cottage Hospital was recently extended and has, in association with it, a health centre.

8 In the north-west sector, the Girvan Cottage Hospital will continue, with consultant supervision coming primarily from the major South Ayrshire hospitals.

Public Water Supplies

1 Water supplies within the region are largely the concern of the South-West of Scotland Water Board but, in the south-west corner of Ayrshire, the supplies are the concern of the Ayrshire and Bute Water Board.

2 Within the area of the South-West of Scotland Water Board the principal sources are Black Esk, Kettleton, Lochfoot, Glenkiln, Lochenkit, Lochinvar, Loch Whinyeon and Penwhirn. These upland lochs, after treatment, largely supply the area through a distribution network of mains some 2,000 miles in extent and plans are being prepared to reinforce and extend this network to meet foreseeable needs.

3 Within the area which is the responsibility of

the Ayrshire and Bute Water Board, *ie* the south-west corner of that Board's whole area, the principal source is at Penwhapple. This source is, however, fully committed and augmentation from another source is at present being planned.

4 In most areas, foreseeable domestic needs can readily be met and, in many areas, water can readily be made available for the needs of industry. However, irrespective of location, extensive use of water may require the establishment of new sources and so early enquiry to ascertain that which is immediately available is essential. To this end, both Boards welcome preliminary inquiries from industrialists so that they may determine whether or not the proposed water requirements can be met.

Mineral Resources

The Edinburgh Office of the Institute of Geological Sciences has provided the following detailed information about the region:

General

1 The greater part of the region is occupied by shales and greywackes (grits) of Ordovician and Silurian age, highly folded rocks which form the main upland areas of the south of Scotland. In general they are limited to the north-west by the Southern Upland Fault, a major fracture which crosses the region between the mouth of Loch Ryan and the vicinity of New Cumnock but they also occupy a considerable area to the south and east of Girvan. To the south-east, between them and the border, younger rocks, of Old Red Sandstone, Carboniferous, Permian and Triassic age occupy a zone which is some 8 miles wide to the north-east of Annan. This passes into a much narrower zone of Carboniferous rocks to the south-west. Except near Girvan, Old Red Sandstone and Carboniferous rocks lie to the north-west of the Southern Upland Fault. Small areas of younger rocks occur within the main Ordovician-Silurian area, principally near Stranraer, Sanquhar, Thornhill, Dumfries, and between Moffat and Lochmaben. There are also several areas of granite rocks, of which the three largest lie between Loch Doon and Loch Dee; between Cairnmore of Fleet and New Galloway; and around Criffel, between Kirkcudbright and Dumfries. The granite of Ailsa Craig was emplaced in Tertiary times but the others are all of Lower Old Red Sandstone age. Glacial and more recent deposits cover much of the ground, the sands and gravels of the lower districts being the most important economically.

At present the principal mineral products of the region are the coals of South Ayrshire and Sanquhar, the limestones of the Girvan area and of southern Dumfriesshire, the granites of Kirkcudbrightshire, the building stones of the Dumfries district, roadstone and concrete-aggregate, sand and gravel, and water. Of potential importance are the metalliferous ores of Wanlockhead and the concealed coals of Canonbie.

Building Stone

2 Permian and Triassic sandstones from the Dumfries, Lochmaben, Thornhill and Annan districts were formerly of considerable importance as building stone, but at present there are only two working quarries, both at Lochabriggs, near Dumfries. Some of the granites of Kirkcudbrightshire are crushed and used to make synthetic facingstones, and the rock itself is used to some extent for the building of bridges, docks and similar work. In recent years basalt blocks from a thick Tertiary dyke near the

site were used in the dam of the Black Esk Reservoir. Carboniferous sandstone was formerly quarried for building at Langholm, and much local use was made of Silurian greywackes in several parts of the region. At Cairnryan Ordovician shales have been quarried as slates.

Monumental Stone, Curling Stones

3 Several of the granite rocks have been quarried in the past for decorative use or as monumental stone. At present a small granite mass south of Creetown is worked for this purpose in a large open pit, and in other granite quarries here and near Dalbeattie suitable blocks are set aside for monumental work. The Permian sandstone at Lochabriggs is used to some extent as a monumental stone, and the serpentine and porphyritic lavas of the Ballantrae area have been suggested as another source.

The riebeckite-granite of Ailsa Craig has long been quarried for the manufacture of curling-stones, which are exported to all parts of the world in which the sport is pursued.

Limestone

4 Ordovician Limestone is quarried at Craighead and at Tormitchell, respectively some $3\frac{1}{2}$ miles to the north-east and south-east of Girvan. The limestones quarried at Blackwoodridge and Caldronlee, some 4 or 5 miles east of Ecclefechan, are of Lower Carboniferous age, as is that which was mined at Harelawhill, 3 miles north-east of Canonbie. In all these cases the processed rock was used in agriculture or for roadstone. In the past these limestones have been extensively worked by quarries and mines in the general vicinity of the recent workings. Other sources of limestone used in the past are the Upper Old Red Sandstone corbstones near New Cumnock, and the Lower Carboniferous in the Dailly district in the ground between New Cumnock, Cumnock, and Muirkirk, in the vicinity of Thornhill, and north-west of Annan. The rock formerly mined at Barjarg, near Thornhill, is a dolomite of considerable purity.

Sand and Gravel

5 In Glacial and more recent times sand and gravel were laid down in large quantities in all the major valleys of the region, and older sandstones which can be crushed to sand are available if required. The areas of most extensive deposition of sand and gravel, and of most extensive exploitation today, are between Loch Ryan and Luce Bay, and in the

lower parts of Nithsdale and Annandale. Other sand and gravel pits are widely scattered throughout the populated areas of the region. The materials are mainly valley-deposits of one sort or another, but in places between the Mull of Galloway and Turnberry they are from present-day or former beaches. Gravel is the principal constituent of the deposits between Luce Bay and Dumfries but sand is worked at one or two pits in that area. Sand from Kirkgunzeon is used for filtration and horticultural purposes. In the lower ground within the extensive, sparsely populated, upland areas of the region there are large quantities of poorly sorted morainic gravel, which have not been exploited on any significant scale. There is a large area of blown sand across the head of Luce Bay. Sand produced as a by-product in the sandstone quarries at Locharbriggs is used for the manufacture of sand-lime bricks. The sand from a pit near Stranraer is said to have been used as an iron-moulding sand.

Clay and Shale

6 Coal Measures shales are used for brick-making at collieries near Cumnock and near Kirkconnel, and were until recent years quarried for this purpose near Sanquhar. A tile works near Ochiltree in Ayrshire obtains its raw material from an old lake site near Barskimming, just outside the region, but until recently used similar clay available at the works itself. Drain tiles and fireproof building blocks are produced here. There are a number of areas of laminated lacustrine clay in the vicinity. Bricks are made from boulder clay near New Cumnock where red 'marls' have also been used, and tiles are made from a small pocket of glacial clay near Langholm. Near Newton Stewart clays from a raised beach are used to make agricultural tiles.

Aggregate

7 The principal sources of roadstone in the region are the granites, the greywackes, and the minor igneous intrusions. Granite provides material at Dalbeattie and at Creetown, greywacke near Dunscore, Dumfriesshire, at Tongland, Kirkcudbrightshire, near Newton Stewart, and at Kirkcowan and Glenluce in Wigtownshire. The limestones quarried at Tormitchell, near Girvan, are used in part for roadstone; greywacke also is quarried at Tormitchell. Shale locally toughened by an igneous intrusion is used near Stoneykirk in Wigtownshire, and greywacke close to granite has been used near Kirkgunzeon and at Clatteringshaws, west of New Galloway. The greywacke at Tongland is quarried along with intrusive porphyrite, by which it has been partly indurated. There are active or recently abandoned quarries in Tertiary basalt dykes at the Black Esk Reservoir and near Moffat, and in Carboniferous basalt at Dinwoodie near Langholm. Gravels are used for roadstone near Dumfries, and at Dalton, a few miles to the east. Quarries specialising in concrete aggregates and concrete products are at Creetown, Dunscore, and Locharbriggs. There are in the region as a whole ample reserves of aggregate material, most abundantly in the greywackes and the granites.

Coal

8 The principal mines are restricted to Ayrshire, in the Auchinleck-Ochiltree area. Seams in the Limestone Coal Group are mined in a small area near Dailly and also near Lugar, but the remainder of the collieries work coal-seams of the Coal Measures. They are located between Ochiltree and Cumnock and New Cumnock. One of the Dalmellington group of collieries lies within the region. In south-eastern Dumfriesshire a considerable area of coal has been proved, but not yet worked, to the south of the old coalfield at Canonbie.

Most of the coal is used for household purposes but a few of the pits produce industrial, steam, manufacturing, and gas coals.

Graphite

9 At Craigman, near New Cumnock, a coal seam has been altered to graphite by an igneous intrusion. The deposit has been mined at times since 1746, most recently in 1910, but the extent of the reserves is not known.

Lead and Zinc

10 Galena has been mined at Wanlockhead and Leadhills, astride the Dumfriesshire-Lanarkshire boundary, at least since the 13th century and possibly since pre-Roman times. It occurs as shoots of ore, up to 12 ft. wide, within veins mainly composed of brecciated Ordovician greywacke. Zinc-blende is locally developed in the Wanlockhead veins and was mined from 1880 onwards. Annual production between 1921 and 1930 averaged 3,750 tons of galena and 220 tons of zinc-blende. The mines were closed in 1929, but Wanlockhead was re-opened for a year in 1934 and again in 1957. Extraction of ore from the old tips was begun at the end of 1964. Reserves of galena are considerable, and in favourable economic circumstances the mining industry could be profitably re-established.

Both galena and zinc-blende have been obtained from a group of parallel veins in Ordovician and Silurian rocks in Kirkcudbrightshire. The mines, which operated mainly in the 19th century, are scattered over a 3-mile zone extending from Gatehouse of Fleet to north-west of Newton Stewart. There was some revival of mining in the time of the Great War, and around 1950 the potentialities of the area attracted some commercial attention, but no sustained development has ensued. Near Carsphairn galena was worked opencoast and then mined between 1840 and 1873. Zinc-blende also occurs in the veins there.

A vein containing galena and zinc-blende has been worked in the past near New Luce. Old lead workings are also known in Ayrshire, near Barr and in the Dalmellington-Auchinleck-New Cumnock area. In Dumfriesshire galena was obtained as a by-product in the Glendinning antimony mine (see below) near Langholm.

Silver and Gold

11 It is probable that up to the end of the 16th century the working of galena at Leadhills was carried out mainly for the extraction of silver. In more recent times silver has been obtained as a by-product from the processing of galena at Wanlockhead, Leadhills, and Blackcraig, near Newton Stewart.

Gold was obtained in considerable quantities in the 16th century from alluvial gravels in the Leadhills district. Towards the end of this period a small vein of gold-bearing quartz is said to have been discovered in the area.

Copper

12 Small quantities of copper have been mined in the lead-zinc areas of Leadhills and between Newton Stewart and Gatehouse of Fleet, and also on the coast south-east of Castle Douglas. The veins are of crushed rock with calcite, quartz, and the ore-minerals, mainly chalcopyrite and malachite. There are old mines in similar material near Kirkcowan, on the coast south of Whithorn, and 3 miles south of Girvan. Old trial mines occur in the Moffat district. Most of the mining records date from between the latter part of the 18th century and the early years of the 20th.

Iron

13 Blackband ironstone of Carboniferous age was mined, mainly in the second half of the 19th century, in the Cumnock area. Towards the end of the century a vein of haematite was temporarily opened up in the hills south-east of Loch Doon. The vein cuts through both the Ordovician sediments and the Loch Doon granite, the haematite apparently occurring in small disconnected pockets. A haematite vein the Criffel granite at Auchencairn was extensively worked in the 19th century, but later re-examination did not lead to further development. Haematite occurs in association with the lead-zinc veins of Wanlockhead and Leadhills, and is common as thin veins in the Ordovician and Silurian rocks generally.

Antimony

14 A vein of stibnite up to 20 in thick has been worked at Glendinning farm, north of the road

between Langholm and Eskdalemuir. Mining has taken place during three short periods, around 1800, 1890 and 1920. A slightly thinner vein has been worked at the Knipes, within a small granite mass about 3 miles south-east of New Cumnock. The re-opening of both of these mines was under consideration in 1940 but mining opinion suggested that the necessary public expenditure could not be justified at that time.

Nickel and Arsenic

15 These elements occur together at Talnotry, some 6 miles east-north-east of Newton Stewart. At one point a deposit of pyrrhotite and nicolite has been worked for nickel and nearby, at the margin of the Cairnmore of Fleet granite, is an old opening in a vein of mispickel, but in neither case was the ore taken away from the site. The former deposit appears to be lenticular and of no great size.

Baryte

16 A group of parallel veins of baryte was extensively worked between 1917 and 1964 in the valley of the Gass Water, between Cumnock and Muirkirk. The main vein locally contained baryte to a thickness of 25 ft. and annual production of ore was for many years of the order of 20,000 tons. Within a radius of about 2 miles of this mine there are several occurrences of baryte, in veins said to be up to 6 ft. thick. Until 1961 baryte was worked intermittently, and on a small scale, at a number of localities near the coast south of Auchencairn, in Kirkcudbrightshire.

Peat

17 Extensive areas of peat occur within the region, especially between Glenluce and Kirkcowan, between Newton Stewart and Wigtown, and south-east of Dumfries. The only mechanised exploitation has been at Lochar Moss, near Dumfries, where ammonium sulphate and peat briquettes were produced at various times up to the Second World War. A full account of all these peat occurrences, and of their possible utilisation is given in Volume 1 of Scottish Peat Surveys published in 1964 by HMSO.



A Strategy for South West Scotland



EDINBURGH
HER MAJESTY'S STATIONERY OFFICE 1970

Foreword

1 The White Paper on the Scottish Economy 1965-70 reviewed the South-West in broad terms and identified those places which seemed to offer the best prospects for further development both in terms of local needs and of the general aim 'to create more employment opportunities so as to take up, in the widest national interest, the available reserves of labour, and to reduce migration'.

2 The object of this present study is to up-date and amplify the information, statistics and analysis then presented so as to make a fuller appreciation of the problems and future prospects of the region and its differing parts, and of the measures needed to secure the best use of its resources.

3 The study was undertaken by the Scottish Office assisted by officials of the local authorities and of other Government Departments with general guidance from a Steering Committee which included the Clerks to the five local planning authorities, the Chairman of the South-West Economic Planning Consultative Group, which suggested the study, and representatives of the Ministry of Technology and the Department of Employment and Productivity.

Members of the Steering Committee participated on the understanding that neither they as individuals nor the bodies or Departments which they represented would have any commitment, explicit or implied, to the study's conclusions and recommendations. Representatives of each local planning and burghal authority were consulted during the survey stage. In autumn last year the report was made available in draft to the local authorities, the Consultative Group and the press. The final report takes account of the many constructive comments which were received from the local authorities and members of the public.

4 The document is not a plan, but provides the essential regional background against which the statutory planning authorities can develop their own plans. It is hoped therefore that publication of the report will promote public understanding and informed discussion of the problems and prospects of the region and that the local authorities, individually and collectively, will find that it provides both a useful conspectus of the present situation and realistic guidelines for them in determining priorities and formulating policy.

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